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ELECTRICAL SYSTEM
AIRBORNE
DIFFICULTIES REVIEW

GENERAL DYNAMICS
Convair Division

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DIFFICULTIES REVIEW

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DIFFICULTIES REVIEW ATLAS BOOSTER
AIRBORNE AND GROUND SUPPORT SYSTEMS.

BOOK II.

GENERAL INFORMATION.

Volume V.
Electrical System Airborne Difficulties
Review.

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Chief of reliability Engineering

GENERAL DYNAMICS
Convair Division
San Diego, California

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BOOK II - DIFFICULTIES REVIEW - AIRBORNE CONTAINS THE FOLLOWING VOLUMES

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|-------------|---|
| VOLUME I | AIRFRAMES |
| *VOLUME II | ABORT SENSING AND IMPLEMENTATION SYSTEM |
| VOLUME III | AUTOPILOT |
| *VOLUME IV | AUXILIARY POWER SOURCE |
| VOLUME V | ELECTRICAL |
| *VOLUME VI | GUIDANCE |
| VOLUME VII | HYDRAULICS |
| VOLUME VIII | INSTRUMENTATION |
| VOLUME IX | PNEUMATICS |
| VOLUME X | PROPELLANT UTILIZATION |
| VOLUME XI | PROPULSION INTERFACE |
| VOLUME XII | PROPULSION |
| VOLUME XIII | RANGE SAFETY COMMAND |

*VOLUMES II, IV AND VI UNDER ONE COVER.

GENERAL INFORMATION

The Difficulties Review encompasses problems gathered from the factory, the field, (ETR and WTR) and UTP. The factory difficulties are limited to "selloff" and rerun composite testing.

In the UTP area, the difficulties were excerpted from Central Test Control Reports, Problem Reports, Supplementary History Sheets and Problem Review Reports.

Field problems for the Difficulties Review have been limited to captive flights, flight readiness firings, actual countdown, dual propellant loading, quad tanking, component reliability testing, and flight acceptance composite tests. Difficulties called out in the search for critical weakness program was not documented.

GSE problems shall be limited to ETR Complex 12, 13, 36A and 36B for the present edition. Hereafter only booster difficulties shall be maintained.

Failure analysis reports cover difficulties from the field and factory and may complement the information above.

The GSE Difficulties Review, Book 1 contains 14 Volumes, one volume for each system, under one cover. Each volume is appropriately indexed.

The Airborne Difficulties Review, Book 2 contains 13 volumes. Each volume is under separate cover except Volumes II, IV and VI. Volumes II, IV, and VI are under one cover because of the limited material contained in each volume. All volumes are appropriately indexed.

A guide to facilitate interpretation of data in the Difficulties Review (GSE and Airborne) is part of each book or volume.

DIFFICULTIES REVIEW ELECTRICAL SYSTEM - AIRBORNE

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GENERAL DYNAMICS

Convair Division

Subject: Explanatory Information For Use of Difficulties Review (DR)
Data Tab Runs

This information has been prepared to facilitate use of the DR. It is not intended to describe how the DR was prepared nor the scope of the existing effort.

The Difficulties Review (DR) is presented on a form compatible with automated data processing and printout.

Appearing at the top of the page (outside of blocked-in areas) is the identification of the system and whether it is Airborne or Ground Support Equipment. Appearing with this identification is the date of the document and the page number.

On the right hand side outside of the blocked area, appears the abstract number. An abstract number is assigned to each item of the Difficulty Review to facilitate traceability to the original input document.

Appearing under the major identification are blocks wherein the information on component or system difficulty is identified and explained. Attached are samples of pages coded for reference to the following definitions and explanations:

CODE

EXPLANATION

①

This group of blocks callout system, subsystem, test/report number, failed component name, difficulty (Dif) data source, and GDC part number if applicable. Also called out here is the vehicle number, if applicable, and the date of difficulty.

In the same row, the site location, and in case of a flight, captive flight, or countdown, the time will be entered.

The block containing PRI and OTH refer to whether or not the failure is primary or a secondary failure. A secondary failure is to be interpreted as caused by another discrepancy.

The last block in this row is obvious and requires no further explanation:

②

Refers to a major system of the launch vehicle.

③

Refers to subsystem of a major vehicle system if applicable, (Booster, sustainer, etc).

GENERAL DYNAMIC

Convair Division

| <u>CODE</u> | <u>EXPLANATION</u> |
|-------------|--|
| (4) | Is a report number as opposed to type of report, (UTP, Countdown, Flight, FAR, etc.). |
| (5) | Is a type of report, such as a FAR, UTP, FRF, etc. |
| (6) | Refers to a component part by name. |
| (7) | Is a component piece part of the component and referred to by name, (plug, seal, wiring, diode, etc., only where applicable). |
| (8) | Is a GDC part number, if applicable. |
| (9) | Refers to a site or location at time of discrepancy on the component or vehicle system. |
| (10) | Is the vehicle on which discrepancy occurred. Vehicle number listed only if unit was installed on a vehicle at time of discrepancy. |
| (11) | Is the vendor part number, if applicable. |
| (12) | Is the vendor name, if applicable. |
| (13) | Is the failure caused by other component or other system. This item defines the failure as secondary or not secondary. |
| (14) | Refers to the primary failure. If item is labeled <u>no</u> , then item (13) may appear as a <u>yes</u> . Should item (13) appear as a <u>yes</u> , then an abstract will have been written to identify the cause of failure effecting the component referred to in the Difficulty Review, Item 6. It should be noted that a multiple failure may be recorded in these blocks, (yes/yes), or if a failure did not occur, (no/no). |
| (15) | Defines the failure mode, and if identifiable, the cause is called out. A careful review of the failure mode is made to determine effect on system operation and vehicle effort. |

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| <u>CODE</u> | <u>EXPLANATION</u> |
|-------------|--|
| 16 | Defines the system effect. This effect is the result of the failure mode assigned to the component. |
| 17 | Defines the vehicle effect. This effect is a result of the failure mode and the result of the system effect. It should be noted that corrective action may be taken whether or not the failure was confirmed. |
| 18 | Lists the corrective action. Taken by GDC, the vendor, or both. |

GENERAL INVESTIGATIVE
DIVISION

DIFFICULTIES REVIEW-HYDRAULIC LAB; EM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | SITE TIME DIP | PRI OTM | VENDOR NAME VENDOR PART NO |
|---|---|--------------------------------|---------------------|------------------|------------|------------------------------------|
| HYDRAULIC-A/B BOOSTER | 2743977 HYDRAULIC PUMP | UTP-PET 87-08588-1 | 841289 | CONVAIR | YES NO | VICKERS AA-60894-R-8A 897093 |
| CORRECTIVE ACTION-DEPT 141-3 TO PERFORM RETEST ON TWO (2) ADDITIONAL UNITS FROM LOT 13, TO DETERMINE LOT ACCEPTABILITY AND PROVIDE COMPARISON DATE. | | | | | | |
| HYDRAULIC-A/B BOOSTER | 8413077 HYDRAULIC PUMP | UTP-PET 87-08588-1 | 841289 | CONVAIR | YES NO | VICKERS AA-60894-R-8A 897093 |
| FAILURE MODE-OUT OF SPECIFICATION. 8/M 400-0430. PEAK TRANSIENT PRESSURES WERE 4100 TO 4800 PSIG, ALLOWABLE IS 4000 PSIG. NO FLOW TO FULL FLOW TIME IS 0.137 SECONDS, ALLOWABLE TIME IS 0.08 SECONDS. | | | | | | |
| HYDRAULIC-A/B BOOSTER | 8413077 HYDRAULIC PUMP | UTP-PET 87-08588-1 | 841289 | CONVAIR | YES NO | VICKERS AA-60894-R-8A 897093 |
| CORRECTIVE ACTION-SUBMIT ECP 7680 TO REVISE TEST REQUIREMENTS TO PRACTICAL LEVELS. | | | | | | |
| HYDRAULIC-A/B BOOSTER | 8413077 HYDRAULIC PUMP | UTP-PET 87-08588-1 | 841289 | CONVAIR | YES NO | VICKERS AA-60894-R-8A 897093 |
| FAILURE MODE-LEAK-EXTERNAL-CONTINUOUS OIL SEEPAGE WAS OBSERVED DURING CHECKOUT. CAUSED BY DEFECTIVE SEAL AT PUMP PLATE PRESSURE SENSING PORT. | | | | | | |
| HYDRAULIC-A/B BOOSTER | 8413077 HYDRAULIC PUMP | UTP-PET 87-08588-1 | 841289 | CONVAIR | YES NO | VICKERS AA-60894-R-8A 897093 |
| CORRECTIVE ACTION-VENDOR REVIEWED STOCK OF O-RINGS AND INFORMED THEIR PERSONNEL OF CORRECT SEAL INSTALLATION PROCEDURES. | | | | | | |
| HYDRAULIC-A/B BOOSTER | 8413077 HYDRAULIC PUMP | UTP-PET 87-08588-1 | 841289 | CONVAIR | YES NO | VICKERS AA-60894-R-8A 897093 |
| FAILURE MODE-LEAK-EXTERNAL. PUMP WAS REPORTED LEAKING AFTER HOT FIRING TEST. CASE WAS OVERPRESSURIZED CAUSING DAMAGE TO CASE COVER SEAL. | | | | | | |
| HYDRAULIC-A/B BOOSTER | 8413077 HYDRAULIC PUMP | UTP-PET 87-08588-1 | 841289 | CONVAIR | YES NO | VICKERS AA-60894-R-8A 897093 |
| CORRECTIVE ACTION-MO CORRECTIVE ACTION RECOMMENDED SINCE DAMAGE OCCURRED DUE TO INADVERTENT OVERPRESSURIZATION OF THE PUMP. | | | | | | |
| HYDRAULIC-A/B BOOSTER | 8413077 HYDRAULIC PUMP | UTP-PET 87-08588-1 | 841289 | CONVAIR | YES NO | VICKERS AA-60894-R-8A 897093 |
| FAILURE MODE-LEAK-EXTERNAL. 8/M 828-0868 FAILED TO MEET CASE DRAIN LEAKAGE REQUIREMENTS OF 0.0 GPM DURING PRE-1AT. THIS UNIT ALSO FAILED TO MEET PEAK TRANSIENT PRESSURE REQUIREMENTS. REFER TO PPR-4261. | | | | | | |
| SYSTEM EFFECT-NONE. | | | | | | |

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DIFFICULTIES REVIEW-HYDRAULIC SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | SITE TIME DIP | PRI OTH | VENDOR NAME VENDOR PART NO |
|---|---|--------------------------------|---------------------|------------------|------------|-------------------------------|
| CORRECTIVE ACTION-BOOSTER HYDRAULIC FILL AND BLEED PERFORMED | | | | | | |
| HYDRAULIC-A/B BOOSTER | PTA8887/P8-WO-D1-0AC8 | COMPOSITE-PRD/DPL | 1310 830713 | 388 | NO | NO |
| FAILURE MODE-FAIL TO OPERATE AT PRESCRIBED TIME. TEST WAS RUN WITHOUT BOOSTER HYDRAULICS BECAUSE BOOSTER MPU COULD NOT BE OPERATED REMOTELY. THIS WAS NOTED DURING AUTOPILOT FINAL CHECKS. | | | | | | |
| SYSTEM EFFECT-OPERATION DOES NOT START. | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | |
| CORRECTIVE ACTION-BOOSTER MPU MANO VALVE, MICROSWITCHES V3 AND V1 ADJUSTED TO MAKE WIPER CONTACT. | | | | | | |
| HYDRAULIC-A/B BOOSTER | 60C/84P83-048/D1-401-00-39 | FLIGHT | 388 830701 | 8-1 -32.3 | YES | NO |
| FAILURE MODE-LEAK. B1 HYDRAULIC ACCUMULATOR PRESSURE EXHIBITED NO PRESSURE DIFFERENCE DURING THE OIL EVACUATION SEC VENCE. | | | | | | |
| SYSTEM EFFECT-POSSIBLE CONTAMINATION. ALTHOUGH THE FAILURE MODE INDICATES THE POSSIBILITY OF AIR IN THE BOOSTER HYDRAULIC SYSTEM, SYSTEM PERFORMANCE WAS SATISFACTORY. | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | |
| CORRECTIVE ACTION-NONE. THE POSSIBILITY OF CONTAMINATION WAS NOT CONFIRMED BY ANY OTHER TELEMETRY DATA. | | | | | | |
| HYDRAULIC-A/B BOOSTER | 60C/84P83-039/82-401-00-177 | FLIGHT | 1770 830603 | 8-2 2.3 | NO | NO |
| FAILURE MODE-OUT OF TOLERANCE. BOOSTER HYD ACCUM. PRESS MEASUR, H33P AND HYD. PUMP OUTLET PRESS. MEASUR H3P INDICATED AN INITIAL NORMAL PRESS. RISE BUT TO A LOWER (1310 PSIA) THAN NORMAL (1330 PSIA) PEAK AT 2.3 SEC. THE PRESS. THEN DECREASED TO 8720 PSIA DURING NEXT 1.3 SEC. SPECIFIC CAUSE UNKNOWN BUT SYMPTOMATIC OF UNUSUALLY HEAVY DEMAND ON SYSTEM. | | | | | | |
| SYSTEM EFFECT-OPERATION TOO LOW. BOOSTER HYDRAULIC PRESS. LOWER THAN NORMAL FOR A TIME PERIOD OF -2.3 SEC TO 1.3 SEC C. NO ADVERSE EFFECT NOTED ON SYSTEM PERFORMANCE. | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | |
| CORRECTIVE ACTION-NONE. | | | | | | |
| HYDRAULIC-A/B BOOSTER | 60C/82M83-013-0A1047-/L4-7MO-01-V1 | COMPOSITE-PRD/DPL | 7107 830416 | 8-4 | YES | NO |

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GENERAL DYNAMICS
CONVAIR DIVISION

15 JUN 1966

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP TIME | SITE DIP TIME | PRI OTH | VENDOR NAME VENDOR PART NO | |
|--|---|--------------------------------|--------------------------|------------------|------------|-------------------------------|--------|
| ELECTRICAL-A/B POWER SOURCE | 89C4547.2 BATTERY MAIN MISSILE | UTP-PRT 89-08309-1 | 880311 | | | YARDNEY 61302 | 890226 |
| FAILURE MODE-HEATER DID NOT OPERATE AFTER TEMP VIB ALT TEST EXAMINATION REVEALED A WIRE BROKEN FROM ITS TERMINAL IN THE RF1 FILTER CIRCUIT, FILTRON PM P8848, CAUSING THE HEATER CIRCUIT TO BE OPEN EVEN WITH THERMOSTAT CLOSED. | | | | | | | |
| CORRECTIVE ACTION-VENDOR ADVISED VIA CARR 8184 AND REQUESTED TO TAKE CORRECTIVE ACTION FOR IMPROVEMENT OF PRODUCT. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | L4-TMO-01-7117 INVERTER | COMPOSITE-FRD/DPL 880408 | 7117 | PALC2-4 | YES NO | | 890373 |
| FAILURE MODE-WHEN ON INTERNAL POWER WITH INVERTER RUNNING OSCILLATIONS WERE NOTED ON SEVERAL ELECTRICAL AND PU SYST EN MEASUREMENTS. FREQUENCY AVERAGED 22 TO 25 CPS AND AMPLITUDE WAS 0.4 VOLTS ON MEASUREMENT E1000V. | | | | | | | |
| SYSTEM EFFECT-ERRATIC OPERATION. | | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | | |
| CORRECTIVE ACTION-THE MISSILE INVERTER WAS REPLACED. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | SLV-90-14-252F MAIN MISSILE BATTERY | FAR 89-08309-1 | 71-16 880318 | | | YARDNEY ELECT. | 890448 |
| FAILURE MODE-OUT OF TOLERANCE. NEGATIVE VOLTAGE EXCURSIONS APPEARED ON LANDLINE RECORDINGS. | | | | | | | |
| CORRECTIVE ACTION-NONE. PROBLEM WAS RESOLVED TO HAVE BEEN CAUSED FROM LANDLINE ANOMOLIES. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | SLV-99-14-253F RETROCKET CONTROL UNIT | FAR 89-81070-1 | 880318 | | | 60/C | 890437 |
| FAILURE MODE-OUT OF SPECIFICATION. EXCESSIVE VOLTAGE SPIKES WERE OBSERVED CAUSED BY DAMAGED CR-3 DIODE. | | | | | | | |
| CORRECTIVE ACTION-RAR SLV-99-14-2683 WAS INITIATED REQUESTING IMPROVED MANUFACTURING INSPECTION. | | | | | | | |

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DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|--|--|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| ELECTRICAL-A/B POWER SOURCE | 89C4321.1 INVERTER, ROTARY | UTP-PET 7-00349-803 | 860304 | | YES | LELAND MGE-106-18 | 890239 |
| FAILURE MODE-OPERATION AFTER TEMPERATURE SHOCK PRODUCED NO AC OUTPUT ON ANY PHASE. A WEDGE WHICH PLANKS THE EXCITER WINDING HAD COME OUT AND WAS CRUSHED BETWEEN THE EXCITER WINDINGS AND THE STATIONARY GENERATOR WINDINGS. | | | | | | | |
| CORRECTIVE ACTION-REPLY TO CARR 6096 STATED NO FAILURE OF THIS TYPE IN TEN YEARS OF PRODUCTION OF SIMILAR EQUIPMENT CONSIDERED RANDOM FAILURE NO CORRECTIVE DESIGN ACTION TAKEN. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 374-3-66-18 INVERTER | FLIGHT | 3050 860210 | ABRESA-1 | YES | LELAND NO | 890393 |
| FAILURE MODE-PRIOR TO 123 SECONDS THERE WERE SEVERAL UNEXPLAINED SHIFTS IN PHASE A AC VOLTAGE. THE LARGEST SHIFT WAS 3 1/3 VOLTS. AT NO TIME WERE VOLTAGE SPECIFICATIONS VIOLATED. | | | | | | | |
| SYSTEM EFFECT-NONE. | | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | | |
| CORRECTIVE ACTION-NONE PLANNED. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 60C/AGUR3-001-37/PC-CO-01-0071-021 POWER SUPPLY | FACTORY | 7121 860124 | FACTORY | NO | | 890310 |
| FAILURE MODE-OUT OF SPECIFICATION. 231 (+28VDC, INTERNAL) OF MIDWEST NO.2 REMAINED BELOW THE LOW CALIBRATION TRACE THROUGHOUT THE TEST AND DISPLAYED 0.25 INCH \pm 0.3 INCH NOISE. THIS PROBLEM WAS APPARENTLY CAUSED BY A DEFECTIVE GA LVANOMETER, INTERACTING WITH THE GALVO FROM CHANNEL 18 OF THE SAME RECORDER. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | ALV-49-14-248P MAIN MISSILE INVERTER | FAR 7-00349-803 | 860117 | FACTORY | | LELAND MGE-106-18 | 890439 |
| FAILURE MODE-OUT OF RECIPITATION OSCILLATIONS WERE OBSERVED ON THE UNITS INPUT AND OUTPUT. | | | | | | | |
| CORRECTIVE ACTION-NONE. FAILURE UNCONFIRMED. | | | | | | | |

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CONVAIR DIVISION

13 JUN 1966

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF TIME | SITE DIF TIME | PRI DIF | VENDOR NAME VENDOR PART NO |
|--|---|--------------------------------|--------------------------|------------------|------------|-------------------------------|
| ELECTRICAL-A/B POWER SOURCE | SLV-9D-14-831F MAIN MISSILE BATTERY | FAR 89-08308-1 | 89-0071- 14 860115 | | | YARDNEY ELECT 61302 |
| FAILURE MODE-LEAK ONE CELL DEVELOPED A LEAK FROM INADEQUATE CEMENTING OF CELLPARTS. | | | | | | |
| CORRECTIVE ACTION-VENDOR WILL USE IMPROVED PS-18 CEMENT. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | B2-4ND-02-85 INVERTER | COMPOSITE-PRD/DPL 651210 | B2 | | YES NO | |
| FAILURE MODE-ERRATIC OPERATION. LANDLINE MEASUREMENT EID28V, EXHIBITED OSCILLATIONS OF 3.5 CPS STARTING AT POWER TR ANSFER TO INTERNAL. THESE OSCILLATIONS STARTED AT 1.8 VDC (PEAK-TO-PEAK) AMPLITUDE AND GRADUALLY DIMINISHED TO APPRO XIMATELY 0.1 VDC BY POWER TRANSFER TO 6.0 SECONDS AND CONTINUED UNTIL COMMIT STOP. TELEMETRY MEASUREMENT E88V, EXHIB ITED SIMILAR DATA, ALTHOUGH NOT QUITE AS APPARENT. THE INVERTER IS SUSPECTED OF CAUSING THIS PROBLEM. | | | | | | |
| SYSTEM EFFECT-NONE. | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | |
| CORRECTIVE ACTION-THE INVERTER WILL BE REPLACED PRIOR TO FLIGHT. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | GO/ABXFG4-035L4-701-00-7103 MAIN VEHICLE BATTERY | COUNTDOWN 27-06359-803 | 7103 | 2-4 | YES NO | |
| FAILURE MODE-FAIL DURING OPERATION - DURING 20 SECOND BATTERY LOAD TEST A HIGH EXTERNAL BATTERY VOLTAGE (34.14 VOL S) AND AN UNUSUAL BATTERY VOLTAGE DECAY UNDER LOAD (30.39 VOLTS AFTER 5 SECONDS) WAS NOTED. DID NOT REPEAT. DURING A T REPEAT OF THE LOAD TEST ALL VALUES WERE WITHIN SPECIFICATION LIMITS OF 28.0 TO 30.4 VOLTS. | | | | | | |
| SYSTEM EFFECT-ERRATIC OPERATION - VOLTAGE LEVELS VARY DURING DIFFERENT LOAD TESTS. | | | | | | |
| VEHICLE EFFECT-NONE - NO HOLDS WERE CALLED BECAUSE OF THIS PROBLEM. | | | | | | |
| CORRECTIVE ACTION-REPLACE BATTERY TO INCREASE CONFIDENCE. FURNISH FIELD PERSONNEL WITH A SET OF BATTERY OPERATION C URVES SO AS THEY MIGHT HAVE INFO TO PROPERLY DEPOSITION FUTURE SIMILAR INCIDENTS. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | SLV-9D-14-248-F MAIN MISSILE BATTERY/THERMOSTAT | FAR 89-08308-1 | 891111 | WTR | YES NO | YARDNEY |
| FAILURE MODE-ELECTRICAL OPEN. THE BATTERY HEATER CIRCUIT REPORTEDLY INDICATED AN OPEN CIRCUIT AFTER THE BATTERY WAS STORED AT ZERO DEGREES FAHRENHEIT. HEATER CIRCUIT FAILURE RESULTED FROM INTERMITTENT OPERATION OF THE SERIES- CONNE CTED THERMOSTATS. | | | | | | |

GENERAL DYNAMICS
CONVAIR DIVISION

13 JUN 1966

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|--|-------------------------------------|---------------------|------------------|----------------------------------|-------------------------------|--------|
| | CORRECTIVE ACTION-FAILURE WAS NOT CONFIRMED. AN INFORMATION-ONLY TYPE OF RELIABILITY ACTION REPORT (RAR SLV-9D-14-3 679) WAS FORWARDED TO THE VENDOR TO ADVISE OF A PROBLEM AREA CONCERNING BATTERY THERMOSTATS. | | | | | | 990340 |
| ELECTRICAL-A/B POWER SOURCE | 69C4833-1 BATTERY-17.5VDC 320 AMPERE-OAO | UTP-PRT 89-08302-1 | 651007 | FACTORY | YES EAGLE PITCHER NO GAP-4183 | | 990969 |
| FAILURE MODE-STRUCTURAL. FOLLOWING THE 3RD AXIS OF VIBRATION, TEMPERATURE, ALTITUDE TEST (VIBRATION 0.3 G SQUARE PC 8 CPS, TEMPERATURE 70 DEGREES F, ALTITUDE 1 MI HG) ONE OF THE BATTERY MOUNTING BRACKETS WAS FOUND TO BE COMPLETELY DETACHED FROM THE BATTERY. ONLY 2 TO 3 OF THE 8 SPOT WELDS SHOWED EVIDENCE OF ADEQUATE PENETRATION. FAILURE WAS DUE TO MANUFACTURING DEFECT. | | | | | | | |
| CORRECTIVE ACTION-321P ADDED A CLAMP TO PROVIDE REDUNDANT RESTRAINT FOR OAO FAIRING BATTERY INSTALLATION. VENDOR NOTIFIED OF FAILURE AND THE CONTAINER VENDOR WILL PERFORM PULL TEST SAMPLES OF THE WELDS ON SUBSEQUENT ORDERS. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 69C4833-1 BATTERY-17.5VDC320 AMPERE-OAO | UTP-PRT 89-08302-1 | 650915 | FACTORY | YES EAGLE PITCHER NO GAP-4183 | | 992969 |
| FAILURE MODE-OUT OF TOLERANCE. DURING EXAMINATION OF PRODUCT THE DIMENSION LOCATING THE CENTER OF MTS HOLE TO OUTER EDGE OF MTS BRACKET WAS MEASURED ON TWO SPECIMENS AND FOUND TO BE 0.976 AND 0.935 INCHES RESPECTIVELY. (SHOULD BE 0.99 TO 1.01 INCHES). | | | | | | | |
| CORRECTIVE ACTION-SPECIFICATION 69-08302 REVISED AS FOLLOWS-DIMENSION 1.000 (PLUS) OR (MINUS) .010 CHANGED TO 1.0 (PLUS) OR (MINUS) .1. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 69C4833-1 BATTERY-17.5VDC 320 AMPERE-OAO | UTP-ET7 89-08302-1 | 650915 | FACTORY | YES EAGLE PITCHER NO GAP-4183 | | 992969 |
| FAILURE MODE-OUT OF TOLERANCE. DURING EXAMINATION OF THE PRODUCT THE DIMENSION LOCATING THE CENTER OF MTS HOLE TO OUTER EDGE OF MTS BRACKET WAS MEASURED ON TWO SPECIMENS AND FOUND TO BE 0.930 AND 0.928 INCHES RESPECTIVELY. (SHOULD BE 0.99 TO 1.01 INCHES). | | | | | | | |
| CORRECTIVE ACTION-SPECIFICATION 69-08302 REVISED AS FOLLOWS. DIMENSION 1.000 (PLUS) OR (MINUS) .010 CHANGED TO 1.0 (PLUS) OR (MINUS) .1. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 60C/22M45-029-DA1060-71 10 MAIN MISSILE BATTERY | COMPOSITE-PRD/DPL 7110 650908 | 7110 | 2-4 | YES NO | | |
| FAILURE MODE-FAIL DURING OPERATION. MAIN MISSILE BATTERY VOLTAGE HIGH FAULT OCCURRED DURING THE FIRST COMMIT. THE HIGH VOLTAGE FAULT HAS BEEN ATTRIBUTED TO INSUFFICIENT PRE-LOAD DURING THE BATTERY LOAD TESTS FOLLOWING RE-CHARGING. | | | | | | | |

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DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | SITE TIME DIP | PRI OTH | VENDOR NAME VENDOR PART NO |
|---|---|--------------------------------|----------------------------------|--------------------------|-------------------|-------------------------------|
| SYSTEM EFFECT-OPERATION TO HIGH. VEHICLE EFFECT-COMPOSITE DELAYED. CORRECTIVE ACTION-THE BATTERY WAS REPLACED BY A SIMULATOR CABLE FOR THE REMAINDER OF THE TEST. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | B2-4MO-03-81 BATTERY | COMPOSITE-FRD/DPL | 61D 650818 | B2 NO | YES NO | 099774 |
| FAILURE MODE-FAILED TO OPERATE AT PRESCRIBED TIME. ENGINES AND APS WENT RED ON LAUNCH ANALYST PANEL. SYSTEM EFFECT-OPERATION STOPS PREMATURELY. VEHICLE EFFECT-COMPOSITE DELAYED. CORRECTIVE ACTION-BATTERY REPLACED. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | B2-4MO-02-81 BATTERY | COMPOSITE-FRD/DPL | 61D 650818 | B2 NO | YES YARDNEY NO | 093483 |
| FAILURE MODE-FAIL TO OPERATE AT PRESCRIBED TIME. A POWER TRANSFER FAULT RESULTED IN COMMIT STOP. SYSTEM EFFECT-OPERATION STOPS PREMATURELY. (COMMIT SEQUENCE). VEHICLE EFFECT-DUAL PROPELLANT LOADING COMPOSITE DELAYED. CORRECTIVE ACTION-REPLACED BATTERY. NOTE-THIS BATTERY WAS 4 YRS. OLD. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | SLV-99-14-242P MAIN MISSILE BATTERY | FAR 69-08309-1 | SLV MOCK FACTORY UP 650813 | YES YARDNEY ELECT. NO | | 093624 |
| FAILURE MODE-OUT OF SPECIFICATION. INDIVIDUAL CELL REVERSAL. INDICATIONS WERE BATTERY THAT WAS DISCHARGED AND DRIVE IN REVERSE BY AN EXTERNAL POWER SOURCE. CORRECTIVE ACTION-FAR SLV-99-14-3875 RECOMMENDING CLOSE ADHERENCE TO BATTERY HANDLING PROCEDURES 69-92703, BOOK 1 B Y COMMITANT PERSONNEL. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 60C/8K765-039/B1-401-00-193 | FLIGHT | 183D 650804 | B-1 290 | NO NO | |
| FAILURE MODE-SHORT (ELECT.). SHORT WITHIN THE RE-ENTRY VEHICLE POWER CIRCUIT AT VECO. SYSTEM EFFECT-OPERATION TOO LOW. VEHICLE DC VOLTAGE DROPPED 1.6 VOLTS TO 27.6 VOLTS BEGINNING AT VECO AND CONTINUIN | | | | | | |

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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|--------------------------------|---|--------------------------------|---------------------|------------------|-------------------------|-------------------------------|--------|
| | 6 FOR 21.0 SECONDS. | | | | | | 094801 |
| | VEHICLE EFFECT-COMMANDS NOT RECEIVED. RE-ENTRY VEHICLE DID NOT SEPARATE. | | | | | | |
| | CORRECTIVE ACTION-NONE. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | MSCAPE1328/PMB-CO-03-04C8 BATTERY | COMPOSITE-J FACT | 151D 050728 | 368 | YES NO | | 097705 |
| | FAILURE MODE-OUT OF SPECIFICATION. BATTERY OPEN CIRCUIT VOLTAGE WAS MEASURED AS 29.6. CURRENT REDLINE 30.0. | | | | | | |
| | SYSTEM EFFECT-LOSS OF REDUNDANCY. | | | | | | |
| | VEHICLE EFFECT-NONE. | | | | | | |
| | CORRECTIVE ACTION-REQUESTING REDLINE CHANGE TO 29.0 VOLTS. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 60/CAGUM3-001-41/PC-CO-01-0033-002 INVERTER | COMPOSITE-FACTORY | 5302 250710 | | NO NO | | 099922 |
| | FAILURE MODE-FAIL TO OPERATE AT PRESCRIBED TIME. DIRECTLINE RECORDING FOR VEHICLE EXTERNAL 28 VDC DID NOT RECORD AN EXPECTED VOLTAGE INCREASE DURING INVERTER ACTIVATION. THIS DISCREPANCY WAS CAUSED BY A SHORT IN THE AGE. | | | | | | |
| | SYSTEM EFFECT-NONE. | | | | | | |
| | VEHICLE EFFECT-COMPOSITE RE-SCHEDULED. | | | | | | |
| | CORRECTIVE ACTION-CORRECTED DISCREPANT AGE CONDITION (SHORT). | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 69C4413-1 BATTERY-MAIN MISSILE | UTP-PRT 69-06309-1 | 650608 | 60/C | YES YARDNEY NO 41302 | | 090970 |
| | FAILURE MODE-EXTERNAL LEAK. DURING THE PRESSURE LEAK CHECK PRIOR TO MANUAL ACTIVATION, A LEAK WAS DETECTED IN CELL NO. 10. INVESTIGATION REVEALED THAT THE LEAK WAS DUE TO IMPROPER BONDING BETWEEN THE CELL CASE AND LID. | | | | | | |
| | CORRECTIVE ACTION-VENDOR TO INCORPORATE PRESSURE CHECK OF CELLS AT VALVES GREATER THAN 9 PSIG. ALL BATTERIES ARE SUBJECT TO A PRESSURE LEAK TEST PRIOR TO ACTIVATION PER PROCEDURE 69-92708 BOOK 1 (INTR), BOOK 2 (ETR). THEREFORE A DEFECT OF THIS TYPE WILL BE DETECTED PRIOR TO BATTERY ACTIVATION AND HENCE PRIOR TO INSTALLATION ON THE VEHICLE. | | | | | | |

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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | SITE TIME DIP | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|---|--------------------------------|---------------------|------------------|------------|-------------------------------|---------|
| ELECTRICAL-A/B POWER SOURCE | B3-4MO-01-88 BATTERY | (COMPOSITE-FRD/DPL | 88D 850521 | B3 | YES NO | EAGLE-PICHER | 8908281 |
| FAILURE MODE-OUT OF TOLERANCE. THE APS BATTERY LIGHT ON THE LAP ILLUMINATED RED DUE TO LOW OPEN CIRCUIT VOLTAGE OF THE VEHICLE MAIN BATTERY. | | | | | | | |
| SYSTEM EFFECT-OPERATION TOO LOW. | | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | | |
| CORRECTIVE ACTION-TRAINING DPL SWITCH ACTIVATED. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | SLV-90-14-237F | PAR 69-06309-1 | 850521 | WTR | YES NO | YARDNEY ELECT. | 8908230 |
| FAILURE MODE-LEAK, EXTERNAL. LOSS OF ELECTROLYTE FROM BATTERY CELL AND RESULTANT DAMAGE TO SURROUNDING SURFACES. | | | | | | | |
| CORRECTIVE ACTION-RAR SLV-90-14-3672 RECOMMENDING VENDOR IMPROVE AREA QUALITY CONTROL. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 59C4394 BATTERY-RSC/TLM | UTP-PRI 69-06318-1 | 850517 | GD/C | YES NO | WHITTAKER | 8908284 |
| FAILURE MODE-ELECTRICAL OPEN. DURING THE 12 DAY ACTIVATED STAND TEST, THE BATTERY HEATER STOPPED OPERATING. FOLLOWING THE INVESTIGATION IT WAS CONJECTURED THAT THE PROBLEM WAS A RESULT OF THE TEST CHAMBER BEING CLOSER TO 50 THAN 40 DEGREES F. 50 DEGREES F IS MARGINAL CLOSING TEMPERATURE FOR THE LOW TEMPERATURE THERMOSTAT. | | | | | | | |
| CORRECTIVE ACTION-NONE. THE BATTERY HEATER CIRCUIT IS CHECKED PER IAI PROCEDURES AND SITE PROCEDURES PRIOR TO ACTIVATION AND INSTALLATION ON THE VEHICLE. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | SLV-90-14-236F MAIN MISSILE BATTERY | PAR 69-06306-1 | 850419 | FACTORY | YES NO | YARDNEY ELECT | 8908280 |
| FAILURE MODE-OUT OF TOLERANCE. EXCESSIVE NOISE CAUSED BATTERY REJECT. HIGH NOISE CONTENT WAS FOUND IN THE LAND LINE BATTERY MONITOR CIRCUIT. FAILURE ANALYSIS FOUND MINOR BATTERY CASE CRACKS ATTRIBUTED TO EXTENDED BATTERY HEATER-ON TIME. | | | | | | | |
| CORRECTIVE ACTION-BATTERY NOISE WAS UNCONFIRMED IN FAILURE ANALYSIS. RAR SLV-90-14-3670 RECOMMENDED THE REVISION OF COUNTDOWN PROCEDURE TO REDUCE THE BATTERY HEATER WARM-UP ON TIME. | | | | | | | |

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| ELECTRICAL-A/B POWER SOURCE | 69C3186.4 BATTERY-RSC/7LM | UTP-PRT 89-08309-1 | 690407 | 60/C | YES NO | YARDNEY NO 6106J |
| <p>FAILURE MODE-OUT OF TOLERANCE. DURING PRT TEST CYCLE 2, THE OUTPUT VOLTAGE WAS ABOVE 30 VOLTS FOR OVER 2 MINUTES AFTER APPLICATION OF THE LOAD AT A DISCHARGE CURRENT OF 1.2 AMPS. THE SPECIMEN HAD BEEN PRELOADED AT 5 AMPS FOR 5 MINUTES. INVESTIGATION REVEALED THAT A LOWER PRELOAD RATE IS REQUIRED.</p> | | | | | | |
| <p>CORRECTIVE ACTION-THE BATTERY HANDLING PROCEDURES (69-98703 BOXES 1 AND 2) WERE REVISED TO REFLECT A PRELOAD RATE OF 1.2 AMPS FOR 20 MINUTES. THE ABOVE PRELOAD RATE WAS SUCCESSFULLY DEMONSTRATED.</p> | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 60/C-BKFB3-027/81-408-00-12J BATTERY | COUNTDOWN | 1500 690408 | B-1 | YES NO | |
| <p>FAILURE MODE-OUT OF SPECIFICATION. A LOW VOLTAGE FAULT WAS INDICATED BY THE 68E COMPARTOR.</p> | | | | | | |
| <p>SYSTEM EFFECT-OPERATION TOO LOW. MAIN MISSILE BATTERY VOLTAGE WAS LOW.</p> | | | | | | |
| <p>VEHICLE EFFECT-COUNTDOWN DELAYED.</p> | | | | | | |
| <p>CORRECTIVE ACTION-REPLACED BATTERY AND GENERATED GIC 48319 TO RESET COMPARTOR LIMITS.</p> | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 60C/BKFB3-028/LA-701-00-7401 BATTERY | COUNTDOWN 69-08309-1 | 7401 690403 | P-4 -3600 | YES NO | YARDNEY |
| <p>FAILURE MODE-LEAK-EXTERNAL. LEAK IN NO. 1 CELL PLASTIC CASE ALLOWED ELECTROLYTE TO ENTER BATTERY CASE AND DAMAGE INTERNAL CIRCUITRY.</p> | | | | | | |
| <p>SYSTEM EFFECT-ERRATIC OPERATION. THE BATTERY OPEN- CIRCUIT VOLTAGE EXHIBITED NEGATIVE EXCURSIONS (8-9VDC) AS ELECTROLYTE CAME INTO CONTACT WITH VARIOUS ELECTRICAL POTENTIALS WITHIN BATTERY CASE.</p> | | | | | | |
| <p>VEHICLE EFFECT-NONE. BATTERY REPLACED DURING HOLD CALLED BY AIRFORCE TO ALLOW TASK ACCOMPLISHMENT TO CATCH UP TO COUNTDOWN CLOCK. NO HOLD CALLED FOR THIS PROBLEM.</p> | | | | | | |
| <p>CORRECTIVE ACTION-BATTERY ACTIVATION PROCEDURE 69-98703 BK1 REVISED TO LIMIT APPLICATION OF BATTERY HEATER POWER TO 30 SECONDS WITHOUT ELECTROLYTE IN CELLS. PROCEDURE 69-98703 BK1 REVISED TO ELIMINATE EXPOSURE OF BATTERIES TO TEMPERATURES BELOW 600 AMBIENT PRIOR TO LAUNCH. BATTERY CELL HEATERS TO BE ANNEALED. NO DETRIMENTAL BATTERY ACTIVATION AND HANDLING PROCEDURES FOUND.</p> | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 8LV-80-14-235P MAIN MISSILE BATTERY | FAR 69-08309-1 | 7401 690403 | WTR | YES NO | YARDNEY ELECT. |
| <p>FAILURE MODE-ELECTRICAL OPEN CIRCUIT FROM LOSS OF ELECTROLYTE.</p> | | | | | | |

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| 093831 | CORRECTIVE ACTION-RAIR 3LV-9D-14-3669 RECOMMENDING 6D/C UPGRADING OF BATTERY HANDLING PROCEDURES AND EXTENSIVE VENDOR R MANUFACTURE AND QUALITY CONTROL CHANGES. | | | | | |
| 091207 | ELECTRICAL-A/B POWER SOURCE | 69C3124.4 BATTERY-MAIN MISSILE | UTP-3LT 69-08309-1 | 6D/C | NO | YARDNEY NO 61302 |
| | FAILURE MODE-LEAK INTERNAL. DURING 3LT RANDOM/SINE VIBRATION, THE SPECIMEN VOLTAGE DROPPED TO 25 VOLTS WHEN THE 4U AMP LOAD WAS APPLIED. INVESTIGATION SHOWED THE CELLS WERE SHORTED TO CASE. EACH CELL WAS EXAMINED AND 17 WERE CRACKED, 3 OF WHICH LEAKED ELECTROLYTE. TWO CELLS WERE DEAD (ZERO VOLTS). | | | | | |
| | CORRECTIVE ACTION-NONE. PROBLEM ATTRIBUTED TO TEST FIXTURE DISCREPANCY PERMITTING THE BATTERY SPECIMEN TO COME INTO PHYSICAL CONTACT WITH THE VIBRATION FIXTURE. THIS RESULTED IN A HAMMERING EFFECT CAUSING BATTERY CELL DAMAGE. THE FIXTURE WAS MODIFIED, TEST RE-RUN SUCCESSFULLY. | | | | | |
| 091208 | ELECTRICAL-A/B POWER SOURCE | 69C3124.4 BATTERY-MAIN MISSILE | UTP-PRT 69-08309-1 | 6D/C | YES | GARDNEY NO 61302 |
| | FAILURE MODE-SHORT, ELECTRICAL. FOLLOWING PRT RANDOM/SINE VIBRATION, THE SPECIMEN WAS FOUND TO BE SHORTED TO CASE. INSPECTION OF THE CELLS DISCLOSED EVIDENCE OF ELECTROLYTE LEAKING FROM THE HOLE IN THE VENT CAP. | | | | | |
| | CORRECTIVE ACTION-THE VENDOR REDUCED THE AMOUNT OF ELECTROLYTE IN EACH CELL BY 1 CC AND ALSO PROVIDED FOR ELECTROLYTE TRAPS THAT FIT ON EACH CELL FILLER NECK TO ABSORB ANY FREE ELECTROLYTE THAT MAY TEND TO FLOW OUT OF THE CELL PROPER. | | | | | |
| 090968 | ELECTRICAL-A/B POWER SOURCE | 69C3126.4 BATTERY-RSC/TLM | UTP-PRT 69-08308-1 | 6D/C | YES | YARDNEY NO 61063 |
| | FAILURE MODE-SHORT (ELECTRICAL). FOLLOWING PRT RANDOM/SINE VIBRATION, THE SPECIMEN WAS FOUND TO BE SHORTED TO THE CASE. INSPECTION OF THE CELLS DISCLOSED LEAKAGE OF ELECTROLYTE FROM THE HOLE IN THE VENT CAPS. THE ELECTROLYTE RAN OVER THE TOPS OF THE CELLS CREATING A CONDUCTING PATH OF ELECTROLYTE FROM THE CELLS TO THE BATTERY CASE. | | | | | |
| | CORRECTIVE ACTION-THE VENDOR REDUCED THE AMOUNT OF ELECTROLYTE IN EACH CELL BY 1CC AND ALSO PROVIDED FOR ELECTROLYTE TRAPS THAT FIT ON EACH CELL FILLER NECK TO ABSORB ANY FREE ELECTROLYTE THAT MAY TEND TO FLOW OUT OF THE CELL PROPER. | | | | | |
| | R. | | | | | |
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| SYSTEM | TEST/REPORT NUMBER | FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|---|-----------------------|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| 300-SYSTEM | | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 69C3126.4 BATTERY-RSC/TLM | UTP-SLT 69-06308-1 | 850318 | 60/C | | YES NO | YARDNEY NO 61083 | 690667 |
| <p>FAILURE MODE-LEAK INTERNAL. FOLLOWING SLT RANDOM/SINE VIBRATION, THE SPECIMEN WAS FOUND TO BE SHORTED TO THE CASE. INSPECTION OF THE CELLS DISCLOSED EVIDENCE OF ELECTROLYTE LEAKING FROM THE HOLE IN THE VENT CAP. ONE CELL CAP WAS MISSING ON THE BATTERY. A LEAK WAS NOTICED AROUND THE THREADS OF THE NEGATIVESTUD OF CELL.</p> <p>CORRECTIVE ACTION-THE VENDOR REDUCED THE AMOUNT OF ELECTROLYTE IN EACH CELL BY 1CC AND ALSO PROVIDED FOR ELECTROLYTE TRAPS THAT FIT ON EACH CELL FILLER NECK TO ABSORB ONLY FREE ELECTROLYTE THAT MAY TEND TO FLOW OUT OF THE CELL PROP ER.</p> | | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 69C3124.3 BATTERY - RSC/TLM RELIEF VALVE | UTP-PRT 69-06308-1 | 850317 | 60/C | | YES NO | POWER SOURCES NO 200994 | 690641 |
| <p>FAILURE MODE-CONTAMINATION. FOLLOWING THE ACTIVATED STAND TEST, THE PRESSURE IN THE SPECIMEN WAS ZERO PSI. INVESTIGATION REVEALED THE PRESSURE RELIEF VALVE WAS LEAKING DUE TO CONTAMINATION HOLDING THE VALVE OPEN. RELIEF VALVE CRACKING PRESSURE IS 10.5 PSI MAXIMUM.</p> <p>CORRECTIVE ACTION-NONE. THE VALVE WAS REMOVED, CLEANED, AND REINSTALLED. TESTING WAS CONTINUED AND THE VALVE HELD PRESSURE. PROBLEMS OF THIS NATURE ARE DETECTABLE BY BATTERY HANDLING PROCEDURES BEFORE MISSILE INSTALLATION AND CAN BE CORRECTED.</p> | | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 60C-8K783-018/03-401-00-134 INVERTER | FLIGHT | 1540 650312 | 23 | | YES NO | BENDIX | 690678 |
| <p>FAILURE MODE-OUT OF SPECIFICATION. TEMPERATURE CYCLING OF VOLTAGE REGULATOR ELEMENTS IN THE BENDIX INVERTER RESULTED IN LOW AC VOLTAGE.</p> <p>SYSTEM EFFECT-OPERATION TOO LOW. AC VOLTAGE DROPPED FROM 115.0 TO 114.4 VOLTS. VOLTAGE THEN GRADUALLY INCREASED TO 114.6 VAC. THIS ANOMALY HAS BEEN OBSERVED ON OTHER BENDIX INVERTERS.</p> <p>VEHICLE EFFECT-NONE.</p> <p>CORRECTIVE ACTION-</p> | | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 60C-8K783-009/A1-401-00-215 INVERTER - REGULATOR | FLIGHT | 2110 650287 | A-1 | | YES NO | | |
| <p>FAILURE MODE-ERRATIC OPERATION. UNUSUAL VARIATIONS ON 114P A VOLTAGE OBSERVED FROM -113 SECONDS (SWITCH TO INTERNAL) TO BECO. THE VARIATIONS HAD A PERIOD OF APPROXIMATELY 15 SECONDS, AND A PEAK TO PEAK AMPLITUDE OF 0.4 VOLTS. ERRATIC OPERATION OF THE INVERTER REGULATOR WAS CONSIDERED TO BE THE CAUSE OF THE VARIATIONS.</p> | | | | | | | | |

GENERAL MANICS
CONVAIR DIVISION

15 JUN 1966

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO |
|--|---|--------------------------------|---------------------|------------------|-------------------------|-------------------------------|
| SYSTEM EFFECT-NONE. THE VOLTAGE VARIATIONS WERE WITHIN THE TOLERANCE OF THE PHASE A VOLTAGE (113.5-117 VOLTS). | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | |
| CORRECTIVE ACTION-NONE. VARIATIONS WERE NOT CONSIDERED TO BE DETRIMENTAL. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 60/C-BRF65-010/ BATTERY | COUNTDOWN 27-06359-003 | 3010 650225 | A3 | YES NO | 095145 |
| FAILURE MODE-FAIL TO OPERATE AT PRESCRIBED TIME. BATTERY FAILED TO ACTIVATE WHEN COMMANDED. | | | | | | |
| SYSTEM EFFECT-OPERATION DOES NOT START. | | | | | | |
| VEHICLE EFFECT-COUNTDOWN DELAYED. | | | | | | |
| CORRECTIVE ACTION-REPLACED BATTERY. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | NZ-SD-14-234F MAIN MISSILE BATTERY | FAR 27-06359-3 | 3010 650225 | WTR | YES EAGLE PITCHER NO | 095632 |
| FAILURE MODE-FAIL TO OPERATE AT PRESCRIBED TIME. BATTERY FAILED TO ACTIVATE. | | | | | | |
| CORRECTIVE ACTION-RAR NZ-SD-14-3666 WAS ORIGINATED TO SURVEY BATTERIES (P/N 27-06359-3 WITH S/N 8 OF 207,490 AND LO WER) AND PURGE FROM STOCK AND RETURN TO VENDOR. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 69C3126.1 BATTERY-RSC/TLM | UTP-PRT 69-06308-1 | 650222 | 60/C | YES YARDNEY NO 61063 | 090642 |
| FAILURE MODE-OUT OF TOLERANCE. DURING EXAMINATION OF PRODUCT THE SPECIMEN WIDTH MEASURED 4.992 INCHES. TOLERANCE IS 9.110 TO 9.130 INCHES. ALSO THE LOCATION OF THE MOUNTING HOLE MEASURED FROM THE EDGE OF THE MOUNTING LEG WAS 0.507 INCHES. TOLERANCE IS 0.47 TO 0.53 INCHES. | | | | | | |
| CORRECTIVE ACTION-ALLOWANCE FOR THE WIDTH DIMENSION WAS CORRECTED PER ECN 394470. THE LOCATION OF THE MOUNTING HOLE WITH RESPECT TO THE EDGE OF THE MOUNTING LEG IS NOT A CRITICAL DIMENSION AND IS DIFFICULT TO MEASURE ACCURATELY, NO WEVER, THE VENDOR WAS NOTIFIED 20/3/66 TO TIGHTEN B.C. IN THIS AREA. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 69C3122.2 BATTERY-MAIN MISSILE | UTP-RUAL/PPT 69-00309-1 | 650217 | 60/C | YES YARDNEY NO 61302 | 090642 |
| FAILURE MODE-OUT OF TOLERANCE. DURING EMI TEST PER MIL-I-26600, THE RADIATED INTERFERENCE EMANATING FROM THE BATTER Y EXCEEDED SPEC LIMITS FROM 150KC TO 80KC. THE CONDUCTED INTERFERENCE ON THE 118 VAC NEUTRAL LINE EXCEEDED SPEC LIMIT S AT 200KC. | | | | | | |

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GENERAL DYNAMICS
CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|--|--------------------------------|---------------------|------------------|--|-------------------------------|--------|
| CORRECTIVE ACTION-SPEC DEVIATION 7000-83 WAS APPROVED TO ALLOW FOR THE EMI OUT OF TOLERANCE. | | | | | | | 891039 |
| ELECTRICAL-A/B POWER SOURCE | 69C3125-2 BATTERY-RSC/TLM | UTP-QUAL/PPT 89-06308-1 | 850210 | 60/C | YES YARDNEY NO 81083 | | 890887 |
| FAILURE MODE-OUT OF TOLERANCE. DURING EMI TEST PER MIL-I-26600, THE RADIATED INTERFERENCE EMANATING FROM THE BATTERY EXCEEDED SPECIFICATION LIMITS FROM 40 TO 400 MC. THE CONDUCTED INTERFERENCE ON THE 115 VAC NEUTRAL LINES WAS ABOVE SPECIFICATION LIMIT AT 150KC. | | | | | | | |
| CORRECTIVE ACTION-SPECIFICATION DEVIATION 7000-84 WAS APPROVED TO ALLOW FOR THE EMI OUT OF TOLERANCE. | | | | | | | 892591 |
| ELECTRICAL-A/B POWER SOURCE | 69C2143-2 BATTERY-17.5 VDC 320 AMPERE-OAO | UTP-QUAL/PPT 89-06308-1 | 850203 | 60/C | YES EAGLE PITCHER NO 6AP-4183 | | |
| FAILURE MODE-OUT OF SPECIFICATION. FOLLOWING EMI TESTING THE BATTERY WAS DISCHARGED AT RATED CURRENT (320 AMPS), HOWEVER, THE OUTPUT VOLTAGE WAS MEASURED TO BE 13.8 DVDC. (SPEC. IS 13.00 VDC MIN.) CAUSE OF DISCREPANCY COULD NOT BE DETERMINED. (THE BATTERY MONITOR CIRCUIT WAS INADVERTENTLY DESTROYED DURING EMI TESTING WHICH COULD ACCOUNT FOR DISCREPANCY. | | | | | | | |
| CORRECTIVE ACTION-NONE. BATTERY IS ONLY USED ON OAO AND THERE IS ADEQUATE SAFETY MARGIN IN THE BATTERY TO ASSURE FILING OF THE SQUIDS AT THIS VOLTAGE. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | CT-98-14-054 MAIN MISSILE INVERTER | PAR 7-00340-803 | 1560 850202 | ETR | YES LELAND AIRBORNE NO E MGE106-16 | | 892583 |
| FAILURE MODE-OUT OF TOLERANCE. INVERTER OUTPUT VOLTAGE AND FREQUENCY WERE REPORTED EXCESSIVELY HIGH. THE REPORTED FAILURE WAS NOT CONFIRMED BY FAILURE ANALYSIS. | | | | | | | |
| CORRECTIVE ACTION-RECOMMEND THAT SITE PERSONNEL EXERCISE MORE CARE IN REJECTING EQUIPMENT. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 69C3125-2 BATTERY-RSC/TLM | UTP-QUAL/PPT 89-06308-1 | 850127 | 60/C | YES YARDNEY NO | | |
| FAILURE MODE-OUT OF TOLERANCE. DURING RECYCLE TEST THE BATTERY VOLTAGE DID NOT FALL BELOW 30 VOLTS WITHIN 2.0 MILLI SECONDS AFTER THE INITIAL APPLICATION OF 1.2 AMPS STADY STATE LOAD. THIS FAILURE WAS A DIRECT RESULT OF NOT PRE-LOADING THE BATTERY LONG ENOUGH TO REMOVE SILVER PEROXIDE WHICH SUPPORTS HIGH VOLTAGE IN BATTERIES. | | | | | | | |

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRT 10TH | VENDOR NAME VENDOR PART NO |
|--------------------------------|---|--------------------------------|---------------------|------------------|----------------------------------|-------------------------------|
| 490930 | | | | | | |
| | CORRECTIVE ACTION-THE BATTERY HANDLING PROCEDURES (69-92703) BOOKS 1 AND 2) WERE REVISED TO PRELOAD BATTERIES AT THE RATE OF 1-2 AMPS FOR 29 MINUTES WHICH HAS BEEN DEMONSTRATED SUCCESSFULLY. | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 69C3126-4 BATTERY-R3C/TLM | UTP-3LT 69-08308-1 | 630126 | 60/C | YES YARDNEY NO 61083 | 490930 |
| | FAILURE MODE-OUT OF TOLERANCE. DURING THE FOURTH TEST CYCLE THE OUTPUT VOLTAGE WAS ABOVE 30 VOLTS FOR 2 MINUTES AFTER START OF DISCHARGE. DURING THE FIFTH CYCLE THE VOLTAGE AGAIN WAS ABOVE 30 VOLTS FOR OVER ONE MINUTE. IN BOTH CASES THE SPECIMENS WERE PRELOADED AT 3 AMPS FOR 7 MINUTES AFTER RECHARGE. | | | | | |
| | CORRECTIVE ACTION-THE BATTERY HANDLING PROCEDURES (69-92703) BOOKS 1 AND 2) WERE REVISED TO REFLECT A LOWER PRELOAD RATE OF 1-2 AMPS FOR 29 MINUTES. | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 69C3125-2 BATTERY-J7.5 VDC 320 AMPERE-RAD | UTP-QUAL/PPT 69-08302-1 | 630125 | 60/C | YES EASLE PITCHER NO 64P-4183 | 490930 |
| | FAILURE MODE-OUT OF SPECIFICATION. DURING EMI TESTING BOTH THE RADIATED AND CONDUCTED INTERFERENCE LEVELS EXCEEDED MIL-1-26500 SPECIFICATION OVER THE MAJORITY OF THE FREQUENCY RANGES TESTED. INTERFERENCE IS CAUSED BY THE BATTERY AFTER CONTROL THERMOSTATS OPENING AND CLOSING. | | | | | |
| | CORRECTIVE ACTION-REQUEST FOR EMI DEVIATION AGAINST MIL-1-26500 HAS BEEN SUBMITTED TO CUSTOMER FOR APPROVAL. BASIS FOR REQUEST ARE: (1) HEATER CRT IS NEARBY AT MISSILE AWAY. (2) INTERFERENCE IS PRODUCED ONLY WHEN THERMOSTATS OPEN AND NO CLOSE WHICH LASTS ONLY MILLISECONDS. | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 69C3125-2 BATTERY-R3C/TLM | UTP-QUAL/PPT 69-08308-1 | 630128 | 60/C | YES YARDNEY NO 61083 | 491780 |
| | FAILURE MODE-OUT OF TOLERANCE. DURING THE FLIGHT PROOF DISCHARGE TEST, THE BATTERY VOLTAGE WAS ABOVE 30 VOLTS IMMEDIATELY FOLLOWING THE 12 AMP DESTRUCT LOADS APPLIED AT 2 MINUTES AND 4 MINUTES DURING THE STEADY STATE DISCHARGE AT 1-2 AMPS. | | | | | |
| | CORRECTIVE ACTION-SPECIFICATION 69-08307 WILL BE CHANGED TO ALLOW 31.5 VOLTS FOR APPROXIMATELY 12 SECONDS AFTER DESTRUCT LOADS ARE APPLIED. | | | | | |

GENERAL DYNAMICS
CONVAIR DIVISION

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DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM | TEST/REPORT NUMBER | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | DATE DIF | DATE DIF | PRI | OTH | VENDOR NAME |
|--|---|---|--------------------------------|---------------------|----------|----------|---------------|-----|-------------|
| SUB-SYSTEM | | | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 81-4MO-DE-188 BATTERY | COMPOSITE-FRD/DPL | 188D 841230 | 8-1 | NO | NO | | | 998303 |
| FAILURE MODE-OUT OF TOLERANCE. COMMIT STOP OCCURRED DUE TO AN INDICATED HIGH MISSILE BATTERY VOLTAGE. THE COMPARTO R WAS DEFECTIVE IN THE LAUNCH CONTROL SYSTEM. | | | | | | | | | |
| SYSTEM EFFECT-NONE. | | | | | | | | | |
| VEHICLE EFFECT-COMPOSITE ABORTED. | | | | | | | | | |
| CORRECTIVE ACTION-MODULE REPLACED. | | | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AS-930-2018/P8-LG-03-DAC4 MAIN BATTERY | COUNTDOWN 87-06339-3 | 148D 841211 | 36A -9300 | YES | YES | EAGLE PITCHER | NO | 998361 |
| FAILURE MODE-OUT OF SPECIFICATION. BATTERY VOLTAGE OUT OF TOLERANCE (BELOW REDLINE). | | | | | | | | | |
| SYSTEM EFFECT-OPERATION TOO LOW. BATTERY VOLTAGE OUT OF TOLERANCE (BELOW REDLINE). | | | | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | | | | |
| CORRECTIVE ACTION-BATTERY WAS REPLACED. | | | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 24V-90-14-230-V BATTERY | PAR 87-06338-803 | 71 D3 841203 | WTR | YES | YES | EAGLE-PITCHER | NO | 998381 |
| FAILURE MODE-OUT OF EXPECTED TEST VALUE WHEN VOLTAGE VERSUS TIME OSCILLOGRAM RECORDING WAS UNUSUAL IN THAT THERE WAS AS A DECREASING SLOPE AFTER 30 SECONDS AFTER LOAD TRANSFER INSTEAD OF THE USUAL SLOW INCREASE. FAILURE WAS NOT CONFIRMED BUT WAS THOUGHT TO BE CAUSED BY A SMALL AMOUNT OF PEROXIDE NOT REMOVED DURING MANUFACTURE. | | | | | | | | | |
| CORRECTIVE ACTION-NONE. | | | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | WSE-303 INVERTER | COUNTDOWN | 108F 841119 | 6 | YES | YES | | | 998383 |
| FAILURE MODE-OUT OF TOLERANCE. AN INVERTER FAIL INDICATION WAS RECEIVED ON THE LCC CONSOLE DURING THE COUNTDOWN. | | | | | | | | | |
| SYSTEM EFFECT-NONE. INVERTER FREQUENCY DURING POST-TEST INVESTIGATION WAS 403 CPS. IT IS BELIEVED THAT A TRANSIENT FREQUENCY CHANGE DURING COUNTDOWN CAUSED THE SOUND FREQUENCY SENSOR TO ACTIVATE IN LAUNCH CONTROL SYSTEM. | | | | | | | | | |
| VEHICLE EFFECT-COUNTDOWN ABORTED. | | | | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | | | | |

GENERAL DYNAMICS
CONVAIR DIVISION

19 JUN 1966

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO |
|---|---|--------------------------------|---------------------|------------------|------------|-------------------------------|
| ELECTRICAL-A/B POWER SOURCE | 89C3128-1 BATTERY - MAIN MISSILE | UTP-QUAL/PPT 89-08308-1 | 840802 | 60/C | YES NO | POWER-SOURCES NO 201004 |
| FAILURE MODE-OUT OF TOLERANCE. DURING EMI TEST PER MIL-1-28600 THE RADIATED INTERFERENCE EMANATING FROM THE BATTERY EXCEEDED SPECIFICATION LIMITS FROM .15 TO 400 MC. THE CONDUCTED INTERFERENCE ON THE TWO 115 VAC POWER LEADS TO THE BATTERY HEATER WAS ABOVE SPECIFICATION LEVEL FOR APPROXIMATELY HALF OF THE TEST FREQUENCIES. | | | | | | |
| CORRECTIVE ACTION-SPEC DEVIATION 7000-83 WAS APPROVED TO ALLOW FOR THE EMI OUT-OF-TOLERANCE. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 89C3125.1 BATTERY RSC/TLM | UTP-QUAL/PPT 89-08308-1 | 840802 | 60/C | YES NO | POWER SOURCES NO 200994 |
| FAILURE MODE-OUT OF TOLERANCE. DURING EMI TEST PER MIL-1-28600, THE RADIATED INTERFERENCE EMANATING FROM THE BATTERY WAS ABOVE SPEC LIMITS IN THE .15 TO 400 MC RANGE. THE CONDUCTED INTERFERENCE ON THE 115 VAC NEUTRAL LINES WAS ABOVE SPEC LIMITS BELOW 3MC. | | | | | | |
| CORRECTIVE ACTION-SPEC DEVIATION 7000-83 APPROVED TO ALLOW FOR THE OUT-OF-TOLERANCES. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 89C3125.1 BATTERY RSC/TLM | UTP-QUAL/PPT 89-08308-1 | 840802 | 60/C | YES NO | POWER SOURCES NO 200994 |
| FAILURE MODE-STRUCTURAL. DURING 2 AXIS RANDOM/SINE VIBRATION TEST THE CORE OF THE PRESSURE RELIEF VALVE FELL OUT. THE SMALL NUT THAT HOLDS THE CORE IN PLACE WAS NOT TIGHT ENOUGH TO WITHSTAND VIBRATION. | | | | | | |
| CORRECTIVE ACTION-THE VENDOR WAS NOTIFIED OF PROBLEM AND ACTION WAS TAKEN TO APPLY LOCK TIGHT ON THE LOCKING NUT TO PREVENT THIS PROBLEM FROM RECURRING ON OTHER VALVES. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 89C3125 BATTERY- RSC/TLM | UTP-QUAL/PPT 89-08308-1 | 840802 | 60/C | YES NO | POWER-SOURCES NO 200984 |
| FAILURE MODE-STRUCTURAL. DURING VIBRATION THE SPECIMEN LOST INTERNAL PRESSURE. SMALL CRACKS WERE FOUND AROUND THE TOP OF THE BATTERY CASE. | | | | | | |
| CORRECTIVE ACTION-THE SPECIMENS WERE IRD FOR REPLACEMENT. THE REPLACEMENT SPECIMENS WERE STRENGTHENED BY SPOT WELDS AROUND THE TOP OF THE BATTERY CASE. ANOTHER VIBRATION TEST WAS RUN ON MODIFIED UNIT AND AGAIN INTERNAL PRESSURE WAS LOST. THE VENDOR WAS INFORMED AND THE BATTERY CASE WAS REDESIGNED PER 80/C RECOMMENDATION. THE REDESIGNED CASE WAS TESTED SUCCESSFULLY. | | | | | | |

GENERAL - JANICS
CONVAIR DIVISION

15 JUN 1986

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PIRT NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|--|---|--------------------------------|---------------------|------------------|------------|--------------------------------|--------|
| ELECTRICAL-A/B POWER SOURCE | 8903122-1 BATTERY RSC/TLM RELIEF VALVE | UTP-PRT 89-06309-1 | 840829 | 60/C | YES NO | YES POWER SOURCES NO 200994 | 890939 |
| FAILURE MODE-CONTAMINATION. THE PRESSURE RELIEF VALVE FAILED TO RESEAL AFTER A TEST OF THE VALVE OPERATING PRESSURE FOLLOWING THE SHOCK TEST. EXAMINATION REVEALED A SMALL PIECE OF FOREIGN MATTER WAS LOGGED IN THE VALVE. | | | | | | | |
| CORRECTIVE ACTION-THE FOREIGN MATTER WAS REMOVED AND THE TEST CONTINUED. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 8903122-1 BATTERY-MAIN MISSILE | UTP-QUAL/PPT 89-06309-1 | 840822 | 60/C | YES NO | YES POWER SOURCES NO 201004 | 890939 |
| FAILURE MODE-STRUCTURAL. FOLLOWING THE TEMPERATURE SHOCK TEST, PRESSURE TESTING THE CELLS REVEALED THE PLASTIC CASE OF THE BATTERY CELLS CRACKED ON TWO OF THE 19 CELLS IN THE BATTERY CASE. SMALL CRACKS WERE ALSO NOTED IN THE POTTING COMPOUND. THE POTTING COMPOUND WAS TOO RIGID AND THE RUSS BARS DID NOT HAVE EXPANSION JOINTS. | | | | | | | |
| CORRECTIVE ACTION-THE SPECIMEN WAS IRO TO THE VENDOR FOR REPLACEMENT. THE REPLACEMENT SPECIMEN WAS MODIFIED SUCH TH AT IT PASSED THE TEMPERATURE SHOCK TEST. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 8903691-1 INVERTER-3KVA, ROTARY | UTP-PRT 7-06349-809 | 840811 | 60/C | YES NO | YES LELAND | 890949 |
| FAILURE MODE-OUT OF TOLERANCE. DURING EXAMINATION OF PRODUCT, FIVE NON-CRITICAL DIMENSIONS WERE MEASURED AND FOUND TO BE OUT OF TOLERANCE. THE VENDOR FAILED TO COMPLY WITH SPECIFICATION CONTROL DRAWING. | | | | | | | |
| CORRECTIVE ACTION-THE SPECIFICATION CONTROL DRAWING TOLERANCES WERE RELAXED TO ALLOW FOR THE MINOR OUT OF TOLERANCE S PER ECN 377516 AND CIC 32646 (REF. PRR 386). | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 8903122-1 BATTERY-MAIN MISSILE | UTP-QUAL/PPT 89-06309-1 | 840801 | 60/C | YES NO | YES POWER SOURCES NO 201004 | 891040 |
| FAILURE MODE-OUT OF TOLERANCE. DURING EXAMINATION OF PRODUCT, THE DIMENSION CONCERNING THE EXTENSION OF THE POWER C ORRECTOR MEASURED 1.03 TO 1.05 INCHES. SHOULD BE 1.00 /MAX/.. | | | | | | | |
| CORRECTIVE ACTION-OUT OF TOLERANCE DIMENSION IS NOT CRITICAL. SPEC CONTROL DRAWING CHANGED TO ALLOW FOR TOLERANCE. DRAWING REVISION RELEASED 301084. | | | | | | | |

15 JUN 1966

GENERAL JANIS
CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|--|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| ELECTRICAL-A/B POWER SOURCE | LV-98-20-3018-F POWER SUPPLY | PAR 27-43018-21 | 840725 | ETR | YES NO | | 095487 |
| FAILURE MODE-OUT OF TOLERANCE-P/U SET REPORTEDLY FAILED TEST POINT ZERO WAS OUT OF TOLERANCE NEGATIVE PER PROCEDURE 27-92262 ROOM 38, STEPS 5.7. FAILURE WAS CAUSED BY A DEFECTIVE POWER SUPPLY P/N 7-04348. POWER SUPPLY FAILURE WAS CAUSED BY DEFECTIVE WIPER OF POTENTIOMETER. | | | | | | | |
| CORRECTIVE ACTION-THE RESULTS OF THIS ANALYSIS WERE FORWARDED TO THE VENDOR FOR HIS INFORMATION: | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | DA1014/L3-4MO-01-353 SENSOR | COMPOSITE-PRD/DPL | 3520 | 2-3 | YES NO | | 096512 |
| FAILURE MODE-OUT OF SPECIFICATION. SENSOR COMPARTOR REF. WAS 112.0 VAC SHOULD HAVE BEEN 112.5 VAC. | | | | | | | |
| SYSTEM EFFECT-OPERATION DOES NOT START. COULD NOT GO TO POWER INTERNAL. | | | | | | | |
| VEHICLE EFFECT-COMPOSITE DELAYED. | | | | | | | |
| CORRECTIVE ACTION-REF. RESET TO 112.5 VAC SUCCESSFUL POWER TRANSFER WAS THEN ACCOMPLISHED. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 50/AAGU43-001-13/FC-CO-01-0017-018 INVERTER | COMPOSITE-FACTORY | 3530 | | NO NO | | 096376 |
| FAILURE MODE-OUT OF TOLERANCE. CHANNEL 31 ON MIDWESTERN RECORDER NO. 2 (INTERNAL DC) INDICATED A 32.6 VDC TRANSIENT DURING POWER CHANGEOVER TO INTERNAL. MAXIMUM TRANSIENT ALLOWED IS 32.0 VDC. THE IRREGULARITY WAS ATTRIBUTED TO IMPROPERLY ADJUSTED POWER SUPPLY NO. 3 (AGE). | | | | | | | |
| SYSTEM EFFECT-OPERATION TOO HIGH. | | | | | | | |
| VEHICLE EFFECT-COMPOSITE DELAYED. POST-COMPOSITE TESTING REQUIRED. | | | | | | | |
| CORRECTIVE ACTION-ADJUSTED AGE POWER SUPPLY. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 7/L-340-01-57 INVERTER | COMPOSITE-PRD/DPL | 57E | F | YES NO | | 096338 |
| FAILURE MODE-OUT OF SPECIFICATION. MISSILE DC VOLTAGE WAS LESS THAN 28.0 VDC DURING THE FIRST 7 SECONDS OF POWER INTERNAL. | | | | | | | |
| SYSTEM EFFECT-OPERATION TOO LOW TEMPORARILY. | | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | | |

13 JUN 1966

GENERAL DYNAMICS
CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | SITE TIME DIP | PRI OTH | VENDOR NAME VENDOR PART NO | |
|--|---|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| ELECTRICAL-A/B POWER SOURCE | CT-98-14-040 ELECTRICAL RELAY | PAR 86-73901-013 | 640319 | ETR | YES NO | MARTMAN ELECTR ICAL | 095870 |
| FAILURE MODE-STRUCTURAL, DUE TO GENERALLY POOR CHOICE OF MATERIALS. | | | | | | | |
| CORRECTIVE ACTION-VENDOR TO IMPROVE QUALITY CONTROL. ADD QUALIFICATION TYPE TESTING TO DETERMINE IF DESIGN REQUIREMENTS ARE MET. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AGUS3-001-14/PC-CO-01-0508-008 INVERTER | COMPOSITE-FACTORY | 1580 640515 | | NO NO | | 094883 |
| FAILURE MODE-OUT OF TOLERANCE. OSCILLATIONS WERE EVIDENT ON THE GYRO OUTPUTS DURING TORQUING EXERCISES, DUE TO A REAT FREQUENCY (PICKUP) BETWEEN THE AIRBORNE INVERTER AND THE GROUND 400 CYCLE INET SUPPLY. | | | | | | | |
| SYSTEM EFFECT-IMPROPER ANALOG SIGNALS. POWER SUPPLY BEAT FREQUENCY CAUSE UNEXPECTED VARIATIONS OF AUTOMILLOT GYRO SIGNALS. | | | | | | | |
| VEHICLE EFFECT-COMPOSITE RESCHEDULED. PARTIAL COMPOSITE RETEST WAS REQUIRED. | | | | | | | |
| CORRECTIVE ACTION-PROBLEM WAS ALLEVATED BY ADJUSTING T.E INET FREQUENCY SUFFICIENTLY BELOW THAT OF THE INVERTER WHEN OPERATING ON INTERNAL POWER. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | GO/AGUS3-001-131FC-CO-01-0023-001 INVERTER | COMPOSITE-FACTORY | 193D 640511 | | NO NO | | 099882 |
| FAILURE MODE-OUT OF TOLERANCE. CHANNEL 55 ON MIDWESTERN RECORDER NO. 8 (INTERNAL 400 CPS) INDICATED FREQUENCY DECREASES OF 5 TO 10 CPS OF 0.05 SECOND DURATION FOUR TIMES BETWEEN INVERTER ON AND POWER CHANGE-OVER TO INTERNAL, UNLESS AFTER POWER CHANGE-OVER TO INTERNAL AND ONCE AFTER CHANGE-OVER TO EXTERNAL. THIS WAS ATTRIBUTED TO A FAULTY METER SELECTOR SWITCH (AGE) ON THE ELECTRICAL PANEL. | | | | | | | |
| SYSTEM EFFECT-NONE. | | | | | | | |
| VEHICLE EFFECT-COMPOSITE RE-SCHEDULED. POST-COMPOSITE TESTING REQUIRED. | | | | | | | |
| CORRECTIVE ACTION-REPLACED AGE ELECTRICAL PANEL. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | GOA/BK784-011/PS-408-0K-283 MAIN BATTERY | COUNTDOWN | 283D 640410 | 12 -40 | YES NO | | |
| FAILURE MODE-OUT OF SPECIFICATION. BATTERY OUTPUT TOO LOW. | | | | | | | |
| SYSTEM EFFECT-OPERATION TOO LOW. VEHICLE EFFECT-COUNTDOWN DELAYED. | | | | | | | |
| VEHICLE EFFECT-COUNTDOWN DELAYED. | | | | | | | |

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GENERAL MANICS
CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|--|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| | CORRECTIVE ACTION-QUOTED TOLERANCE WAS DETERMINED TO BE INCORRECT FOR THE VEHICLE IN QUESTION. ICH 310820 (FOR 263D ONLY) WAS WRITTEN TO CHANGE REDLINE TO PROPER VALUE. | | | | | | 099365 |
| ELECTRICAL-A/B POWER SOURCE | GUA-AP264-026/P1-801-00-137 BATTERY, MAIN MISSILE | FLIGHT | 137F 840401 | 11 405 | YES NO | | 094674 |
| FAILURE MODE-OUT OF TOLERANCE. ABNORMAL VOLTAGE OUTPUT FROM BATTERY DUE TO A DISCHARGING BATTERY CELL. FAILURE BIMI LAR TO FLIGHT OF 13E BATTERY FAILURE AT 500 SECS. | | | | | | | |
| SYSTEM EFFECT-OPERATION TOO LOW. AT 485 SECS BATTERY VOLTAGE BEGAN TO DECAY FROM A LEVEL OF 28.4 VDC TO 21.3 VDC AT 815 SECS. AT THIS TIME THE INVERTER FREQ. DROPPED ABRUPTLY AND ALL AC VOLTAGES DECAYED. | | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | | |
| CORRECTIVE ACTION-NONE-BATTERY PERFORMED SATISFACTORILY DURING POWERED FLIGHT. | | | | | | | 094989 |
| ELECTRICAL-A/B POWER SOURCE | SLV-9D-14-218-F INVERTER-MAIN MISSILE | FAR 7-06349-803 | 36D 840316 | WTR | YES NO | LELAND MCE-108-18 | |
| FAILURE MODE-ELECTRICAL SHORT, OUT OF TOLERANCE WITH RESPECT TO VOLTAGE DUE TO SHORTED DIODE CR-2. | | | | | | | |
| CORRECTIVE ACTION-NONE. | | | | | | | 095812 |
| ELECTRICAL-A/B POWER SOURCE | A-49-14-207-F INVERTER | FAP 87-06178-3 | 112-F 840180 | FACTORY | NO NO | LELAND MCE-108-13 | |
| FAILURE MODE-OUT OF TOLERANCE. WITH RESPECT TO FREQUENCY. FAILURE NOT CONFIRMED DURING EXTENSIVE ELECTRICAL AND ENVIRONMENTAL TESTS. | | | | | | | |
| CORRECTIVE ACTION-THIS ITEM WAS WITHIN SPECIFICATIONS. RESPONSIBLE PERSONNEL WERE REQUESTED TO ACCEPT INVERTERS SATISFYING REQUIREMENTS OF APPLICABLE OPERATING PROCEDURES. | | | | | | | 094634 |
| ELECTRICAL-A/B POWER SOURCE | LV-9D-14-208-F INVERTER-DIODE | FAR 7-06349-803 | 285-D 840117 | WTR | YES NO | LELAND MCE-108-18 | |
| FAILURE MODE-ELECTRICAL SHORT, OUT OF TOLERANCE WITH RESPECT TO A.C. VOLTAGE DUE TO SHORT INVERTER DIODE C1-2. | | | | | | | |
| CORRECTIVE ACTION-VENDOR ADVISED OF FAILURE. NO FURTHER ACTION AS THIS WAS ONLY DIODE FAILURE IN MORE THAN EIGHTY NO MTBS. | | | | | | | |

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DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | DATE DIF | DATE DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|--|--|--------------------------------|---------------------|----------|-----------|------------|-------------------------------|---------|
| ELECTRICAL-A/B POWER SOURCE | CT-98-14-027P MAIN MISSILE INVERTER | FAR 7-08399-803 | 128D 631106 | CTR | YES NO | YES NO | LELAND AIRBORNE MGE108-16 | 0898768 |
| FAILURE MODE-OUT OF SPECIFICATION. INVERTER OUTPUT VOLTAGE OSCILLATING. FAILURE ANALYSIS FOUND A SHORT CIRCUITED CAPACITOR IN THE INVERTERS SPEED CONTROL. | | | | | | | | |
| CORRECTIVE ACTION-INFORM THE VENDOR REQUESTING HIS QUALITY CONTROL IMPROVEMENT. | | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AX63-0003-233D/FC-CO-02-0013-014 INVERTER | COMPOSITE-FACTORY | 233D 631015 | | NO NO | | | 0898860 |
| FAILURE MODE-ERRATIC OPERATION. CHANNEL 35 OF MIDWESTERN RECORDER NO. 2 (INTERNAL VAC) INDICATED ABOUT 0.5 VAC CHANGES IN LEVEL AT NUMEROUS TIMES DURING THE TEST. ALSO, EXCESSIVE FLUCTUATIONS WERE OBSERVED ON THE EXTERNAL AND INTERNAL VDC PARAMETERS. | | | | | | | | |
| SYSTEM EFFECT-NONE. | | | | | | | | |
| VEHICLE EFFECT-COMPOSITE RESCHEDULED. POST-COMPOSITE TESTING REQUIRED. | | | | | | | | |
| CORRECTIVE ACTION-REPLACED THE FILTER NETWORK IN THE AGE POWER SUPPLY. | | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 63-0872 82-402-00-63 INVERTER | COMPOSITE-FRD/DPL | 63D 631004 | 82 | YES NO | | | 0898843 |
| FAILURE MODE-OUT OF TOLERANCE. THE 400V GENERATOR WAS IMPROPERLY WIRED CAUSING THE GYRO8 TO SPIN BACKWARDS. | | | | | | | | |
| SYSTEM EFFECT-OPERATION DOES NOT START. | | | | | | | | |
| VEHICLE EFFECT-COUNTDOWN ABORTED AND RESCHEDULED. | | | | | | | | |
| CORRECTIVE ACTION-RE-WIRE CORRECTLY. | | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | ACU83-001-24/FC-CO-01-0071-006 INVERTER | COMPOSITE-FACTORY | 7106 631002 | | NO NO | | | 0898920 |
| FAILURE MODE-OUT OF TOLERANCE-24VDC INPUT TO INVERTER DID NOT STABILIZE AT GREATER THAN OR EQUAL TO 24VDC WITHIN THE MINIMUM 10 SECOND REQUIRED AFTER INVERTER ON DUE TO HIGH LOAD DRAIN ON AGE POWER SOURCE. | | | | | | | | |
| SYSTEM EFFECT-OPERATION TOO LOW. | | | | | | | | |
| VEHICLE EFFECT-COMPOSITE RE-SCHEDULED. PROPER OPERATION VERIFIED ON SUBSEQUENT COMPOSITE. | | | | | | | | |
| CORRECTIVE ACTION-INSTALL AN ADDITIONAL POWER SOURCE WHICH WILL DIMINISH THE LOAD DRAIN ON THE ORIGINAL SUPPLY. THIS WAS A RECURRING PROBLEM AND WAS CORRECTED FOR BLV 3 7110 AND ON. | | | | | | | | |

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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|--|---|----------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| ELECTRICAL-A/B POWER SOURCE | 9P-AB-14-188-F INVERTER | PAR 7-06349-803 | 135-D 830930 | FACTORY | NO | LELAND NO MGE-108-10 | 993761 |
| FAILURE MODE-OUT OF TOLERANCE WITH RESPECT TO FREQUENCY. | | | | | | | |
| CORRECTIVE ACTION-FAILURE OR OUT OF TOLERANCE NOT CONFIRMED. TEST SHOWED FREQUENCY TO BE WITHIN SPECIFICATION. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | FTAB251/P3-4CO-08-187 BATTERY | COMPOSITE-J FACT 27-08339-803 | 197D 830930 | 13 | YES | EAGLE PITCHER NO | 994292 |
| FAILURE MODE-OUT OF TOLERANCE. BATTERY REACHED REDLINE VOLTAGE 31.5 APPROX 15 MIN AFTER ACTIVATION DECREASED TO 31.4. | | | | | | | |
| SYSTEM EFFECT-OPERATION TOO LOW. | | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | FTAB249/P3-4CO-05-197 INVERTER | COMPOSITE-L-B FACT | 197D 830926 | 13 | YES | BENDIX NO | 994294 |
| FAILURE MODE-ERRATIC OPERATION. E309-400 CYCLE AC POWER SUP, SHOWED INCREASE FROM 400 TO 401.2. A VERY SLIGHT CHANGE IN THE MSL 28 V POWER SUP VOLTAGE WAS NOTED AT THIS TIME. SIMILAR PRESS CHANGES HAVE BEEN NOTED ON PREVIOUS MSLR. A NO ARE THOUGHT TO BE CHARACTERISTIC OF THIS INVERTER. | | | | | | | |
| SYSTEM EFFECT-NONE. | | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AGU83-001-021/PC-CO-01-0071-003 INVERTER | COMPOSITE-FACTORY 7-06349-803 | 710S 830919 | NO | NO | | 999089 |
| FAILURE MODE-OUT OF TOLERANCE. 28VDC INVERTER INPUT DID NOT STABILIZE /Y GREATER THAN OR EQUAL TO 25VDC WITHIN THE REQUIRED 10 SECOND MINIMUM TIME LIMIT FROM INVERTER ON DUE TO HIGH LOAD DRAIN ON AGE POWER SOURCE. | | | | | | | |
| SYSTEM EFFECT-OPERATION TOO LOW. | | | | | | | |
| VEHICLE EFFECT-COMPOSITE RESCHEDULED. PROPER OPERATION VERIFIED ON SUBSEQUENT COMPOSITE. | | | | | | | |
| CORRECTIVE ACTION-INSTALL ADDITIONAL POWER SOURCE WHICH WILL DIMINISH LOAD DRAIN ON AGE POWER SOURCE. THIS IS A RECURRING PROBLEM AND WILL BE CORRECTED FOR SLV 3 7110 AND ON. | | | | | | | |

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DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|--|---|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| ELECTRICAL-A/B POWER SOURCE | SP-90-14-199F INVERTER | FAR 7-06349-803 | 2240 0-0914 | WTR | NO NO | LELAND MGE-108-16 | 893782 |
| FAILURE MODE-OUT OF TOLERANCE WITH RESPECT TO FREQUENCY OUTPUT. FREQUENCY COULD NOT BE CALIBRATED USING MARCHE WITH OUT A NOISE FILTER INSTALLED. HARMONIC DISTORTION OF THE UNLOADED INVERTER CAUSED ERRONEOUS CALIBRATION. | | | | | | | |
| CORRECTIVE ACTION-ECP ACTION TO PROVIDE NOISE FILTER FOR THE MARCHE TRAILER EIDS195. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | DA971/L3-4MO-01-212 MAIN MISSILE BATTERY | COMPOSITE-FRD/DPL | 2120 830901 | WTR | YES NO | | 897312 |
| FAILURE MODE-OUT OF SPECIFICATION-MISSILE DC VOLTAGE EXCESSIVE WHEN ON INTERNAL POWER (32.8VDC). SYSTEM EFFECT-NONE. THIS VOLTAGE (32.8VDC) IS COMPATIBLE WITH ALL MISSILE SYSTEMS EXCEPT GE GUIDANCE. GUIDANCE CANE STERS WERE. REPLACED AS A PRECAUTIONARY MEASURE. VEHICLE EFFECT-COMPOSITE DELAYED. | | | | | | | |
| CORRECTIVE ACTION-BATTERY WILL BE REPLACED PRIOR TO FLIGHT. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | SP-90-14-193-F INVERTER | FAR 7-06349-803 | 730 830711 | WTR | NO NO | LELAND | 894301 |
| FAILURE MODE-ERRATIC OPERATION. REPORTED FAILURE OF 0.6 VOLTS FLUCTUATION IN OUTPUT WAS NOT A FAILURE. SPECIFICATIO N ALLOWS A 1.7 VOLT FLUCTUATION. | | | | | | | |
| CORRECTIVE ACTION-WTR PERSONNEL WERE ADVISED THAT THIS AMOUNT OF FLUCTUATION WAS DUE TO CHANGING LOADS DURING MISSI LE TEST AND WAS NORMAL. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | SP-90-14-194-F INVERTER-DICOD | FAR 7-06349-803 | 730 830711 | WTR | YES NO | LELAND MGE 108-16 | 894300 |
| FAILURE MODE-SHORTED DIODE CR-2 RESULTED IN REDUCTION OF OUTPUT VOLTAGE TO BELOW 110 VAC. THE FAILED DIODE WAS INST ALLED AT 60/C TO UP-DATE THE-801 INVERTER TO A-803. DIODE WAS SUSPECTED OF BEING BAD WHEN INSTALLED. | | | | | | | |
| CORRECTIVE ACTION-RECOMMENDED REVIEW OF INSPECTION PROCEDURES REGARDING REPEAT AFTER REPLACEMENT OF DIODE. | | | | | | | |

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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|---|-----------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| ELECTRICAL-A/B POWER SOURCE | SP-99-14-192-C INVERTER | FAR 7-06349-003 | 930814 | FACTORY | YES NO | YES LELAND MO MCE-108-16 | 994302 |
| FAILURE MODE-FAILED DURING OPERATION WHILE BEING SUBJECTED TO 12G VIBRATION IN ENGINEERING TEST LABORATORY. | | | | | | | |
| CORRECTIVE ACTION-NONE-NO ANALYSIS MADE- ITEM REPAIRED BY ENGINEERING. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | ZZH63-021/DA943/L2-4MO-01-139 PRECISION POWER SUPPLY | COMPOSITE-FRD/DPL 27-66642-501 | 139D 930802 | 1-2 | YES NO | YES RCA | 997830 |
| FAILURE MODE-FAILURE DURING OPERATION. PRECISION POWER SUPPLY FAILURE. | | | | | | | |
| SYSTEM EFFECT-OPERATION STOPS PREMATURELY. ELECTRICAL SYSTEM LOST POWER. | | | | | | | |
| VEHICLE EFFECT-COMPOSITE DELAYED. | | | | | | | |
| CORRECTIVE ACTION-POWER SUPPLY REPLACED. (PAR 9D-38-2371). | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | CA-49-14-176-F INVERTER | FAR 7-06349-3 | 197-D 930409 | FACTORY | YES NO | YES BENDIX NO 32377-13A | 999828 |
| FAILURE MODE-ERRATIC OPERATION ABRUPT VARIATIONS OCCURRED IN VOLTAGE OUTPUT AND FREQUENCY. THIS FAILURE WAS NOT CONFIRMED BY EXTENSIVE TESTS AND ANALYSIS. | | | | | | | |
| CORRECTIVE ACTION-NONE-REPORTED FAILURE WAS NOT CONFIRMED. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AX63-0003-1970/FC-CO-01-0021-001 INVERTER | COMPOSITE-FACTORY 7-06349-3 | 197D 930404 | | YES NO | YES BENDIX NO | 999861 |
| FAILURE MODE-ERRATIC OPERATION. CHANNELS 35 AND 35 OF MIDWESTERN RECORDER NO. 2 (115 VAC AND INVERTER FREQUENCY) INDICATED ABRUPT VARIATIONS OF UP TO 0.5 VAC AND A CONTINUOUS INCREASE OF 2 CPS DURING THE TEST. | | | | | | | |
| SYSTEM EFFECT-ERRATIC OPERATION. | | | | | | | |
| VEHICLE EFFECT-COMPOSITE RE-SCHEDULED. SYSTEMS LEVEL AND POST-COMPOSITE TESTING REQUIRED. | | | | | | | |
| CORRECTIVE ACTION-REPLACED THE INVERTER. | | | | | | | |

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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | SITE TIME DIP | PRI OTH | VENDOR NAME VENDOR PART NO |
|--|--|--------------------------------|---------------------|------------------|------------|-------------------------------|
| ELECTRICAL-A/B POWER SOURCE | MG-08-14-178-P INVERTER | FAR 7-06349-3 | 630326 | ETR | YES NO | YES DEMOIX NO 32677-13 |
| <p>FAILURE MODE-ERRATIC OPERATION-VARIATIONS OF 0.7 VAC OCCURRED IN OUTPUT VOLTAGE. THIS VARIATION WAS CONFIRMED BUT 1 S WITHIN SPECIFICATIONS OF THE UNIT. THIS VARIATION DOES NOT CONSTITUTE A FAILURE.</p> <p>CORRECTIVE ACTION-NONE.</p> | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AX63-0003-130D/PC-CO-03-0004-022 INVERTER | COMPOSITE-FACTORY | 130D 630302 | | YES NO | |
| <p>FAILURE MODE-ERRATIC OPERATION. THE MIDWESTERN RECORDER INTERNAL AC VOLTAGE TRACE INDICATED A 0.4 VOLT DROP DURING A STATIC LOAD.</p> <p>SYSTEM EFFECT-ERRATIC OPERATION. A 0.4 VOLT DROP OCCURRED DURING STATIC LOAD ON INTERNAL AC.</p> <p>VEHICLE EFFECT-COMPOSITE RE-SCHEDULED. SYSTEMS LEVEL AND COMPOSITE RETESTS REQUIRED.</p> <p>CORRECTIVE ACTION-ENGINEERING TESTS INDICATED SATISFACTORY INVERTER OPERATION, HOWEVER, THE INVERTER WAS REPLACED.</p> | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AX63-0003-130D/PC-CO-03-0004-022 INVERTER | COMPOSITE-FACTORY | 130D 630302 | | NO NO | |
| <p>FAILURE MODE-FAIL DURING OPERATION. THE INTERNAL AND EXTERNAL DC TRACES ON THE MIDWESTERN RECORDER INDICATED HIGHER THAN EXPECTED NOISE LEVEL.</p> <p>SYSTEM EFFECT-NONE.</p> <p>VEHICLE EFFECT-COMPOSITE RE-SCHEDULED. POST-COMPOSITE TESTING REQUIRED.</p> <p>CORRECTIVE ACTION-THE MAIN MISSILE DC POWER SUPPLY (AGE) WAS REPLACED, AND THE POWER SUPPLY FILTER WAS ADJUSTED.</p> | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AX63-0003-133F/PC-CO-01-0011-031 INVERTER | COMPOSITE-FACTORY | 133F 630301 | | YES NO | YES LELAND NO |
| <p>FAILURE MODE-OUT OF TOLERANCE. AT -23 MINUTES THE 115 VAC PARALLEL MONITORED ON MIDWESTERN RECORDER NO. 2 AND THE AGE ELECTRICAL METER, INDICATED 117.5 VAC 1.8 ABOVE THE ALLOWABLE TOLERANCE. CAUSE OF FAILURE WAS AN IMPROPERLY ADJ USTED INVERTER.</p> <p>SYSTEM EFFECT-OPERATION TOO HIGH.</p> <p>VEHICLE EFFECT-COMPOSITE RE-SCHEDULED. SUBSYSTEM AND COMPOSITE RETEST REQUIRED.</p> | | | | | | |

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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF TIME | SITE DIF TIME | PRI DIF TIME | VENDOR NAME VENDOR PART NO | |
|--|--|--------------------------------|--------------------------|------------------|-----------------|-------------------------------|--------|
| CORRECTIVE ACTION-THE INVERTER WAS READJUSTED AND SATISFACTORY OPERATION VERIFIED DURING SUBSEQUENT COMPOSITE TESTS. | | | | | | | 000374 |
| ELECTRICAL-A/B POWER SOURCE | P1-8CO-02-13/ BATTERY | COMPOSITE-J FACT | 134F 630223 | 11 | NO | NO | 003301 |
| FAILURE MODE-FAIL DURING OPERATION. THE BATTERY LOCATED IN THE ATLAS ADAPTER THAT SUPPLIES POWER TO FIRE THE SEPARATION SQUIBS WAS ACTIVATED DURING THE COMPOSITE AND WAS IMMEDIATELY SHORTED AND DISCHARGED DUE TO REVERSED POLARITY IN THE RE-ENTRY VEHICLE CIRCUITRY. | | | | | | | |
| SYSTEM EFFECT-OPERATION STOPS PREMATURELY. POWER SOURCE LOST WHEN BATTERY IMMEDIATELY SHORTED AND DISCHARGED UPON ACTIVATION. | | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | | |
| CORRECTIVE ACTION-REDESIGNED RE-ENTRY VEHICLE CIRCUITRY AND REPLACE BATTERY. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AX03-0003-200D/FC-CO-01-0019-019 INVERTER | COMPOSITE-FACTORY | 200D 630222 | | NO | NO | 000650 |
| FAILURE MODE-OUT OF TOLERANCE. TELEMETRY MEASUREMENT ES1V WHICH MONITORS 115 VAC, PHASE A, OF THE INVERTER, INDICATED 113.4 VAC WHEN 114.5 VAC WAS EXPECTED. THIS WAS CAUSED BY A FAULTY MISSILE ELECTRICAL PANEL METER RESULTING IN AN ERRONEOUS SETTING. | | | | | | | |
| SYSTEM EFFECT-NONE. | | | | | | | |
| VEHICLE EFFECT-COMPOSITE RE-SCHEDULED. POST-COMPOSITE TESTING REQUIRED. | | | | | | | |
| CORRECTIVE ACTION-THE MISSILE ELECTRICAL PANEL METER WAS REPLACED. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AX03-0003-139D/FC-CO-02-0008-019 INVERTER | COMPOSITE-FACTORY | 139D 630208 | | NO | LELAND NO | 000663 |
| FAILURE MODE-OUT OF TOLERANCE. THE INVERTER OUTPUT WAS BELOW 115.5 VAC AT VARIOUS TIMES DURING THE TEST. THIS CONDITION ALSO OCCURRED ON THE FIRST COMPOSITE TEST. THE INVERTER HAD BEEN ADJUSTED APPROXIMATELY 1.0 VAC LOW DUE TO A FAULTY AGE FREQUENCY MONITOR PANEL. | | | | | | | |
| SYSTEM EFFECT-OPERATION TOO LOW. | | | | | | | |
| VEHICLE EFFECT-COMPOSITE RESCHEDULED. POST-COMPOSITE TESTING REQUIRED. | | | | | | | |
| CORRECTIVE ACTION-READJUSTED INVERTER. | | | | | | | |

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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF TIME | SITE | PRI OTH | VENDOR NAME VENDOR PART NO |
|---|---|--------------------------------|--------------------------|------------|------------|-------------------------------|
| ELECTRICAL-A/B POWER SOURCE | ARI41-0-1-142/PC-4CO-03-142 BATTERY | COMPOSITE-FACTORY | 1423 021210 | NO NO | | 000449 |
| FAILURE MODE-OUT OF TOLERANCE PRIOR TO POWER CHANGEOVER TO INTERNAL. RECORDER INDICATED AN OUT OF TOLERANCE VOLTAGE OF 33.5 VDC. MAXIMUM ALLOWABLE: INPUT VOLTAGE IS 30 VOLT. | | | | | | |
| SYSTEM EFFECT-NONE. | | | | | | |
| VEHICLE EFFECT-COMPOSITE DELAYED. POST COMPOSITE TESTING REQUIRED WITH A NEW INVERTER TO SHOW SATISFACTORY OPERATION. | | | | | | |
| CORRECTIVE ACTION-NOT KNOWN. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | A-49-14-103-F INVERTER-ELECTRICAL MAIN MISSILE | FAR 27-06176-3 | 021210 FACTORY | NO NO | | 004970 |
| FAILURE MODE-REPORTED ERRATIC OPERATION DUE TO OUTPUT VOLTAGE FLUCTUATING. FAILURE NOT CONFIRMED BY EXTENSIVE TESTS. IT WAS LATER LEARNED THAT THE TEST PROCEDURE HAD NOT BEEN CORRECTLY FOLLOWED WHEN REJECTING THE INVERTER. | | | | | | |
| CORRECTIVE ACTION-CHECKOUT PERSONNEL WERE INSTRUCTED IN THE CORRECT USE OF THE INVERTER TEST PROCEDURE AND EQUIPMENT. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AC-03-0001/32-803-06-73 INVERTER | CAPTIVE | 75F 021126 | 32 0 | NO NO | 000620 |
| FAILURE MODE-FAIL DURING OPERATION. AT ENGINE IGNITION THE INVERTER 115 VAC DATA INDICATED A MOMENTARY SPIKE TO 120 VAC. CAUSED BY THE NEW 4 AMPERE SP66 INITIATORS MOMENTARILY LOADING DOWN THE GROUND 28VDC. DURING THIS TEST THE INVERTER DC INPUT POWER WAS PROVIDED BY THE GROUND SYSTEM AND NOT A VEHICLEBORNE BATTERY. | | | | | | |
| SYSTEM EFFECT-NONE. | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | |
| CORRECTIVE ACTION-NONE. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 20J82-0059/02-632-00-13 INVERTER | FLIGHT | 13P 021114 | 6 -07.0 | YES NO | |
| FAILURE MODE-OUT OF SPECIFICATION. PHASE A VOLTAGE WAS TOO LOW THROUGHOUT THE FLIGHT AND IS ATTRIBUTED TO A FAULTY PRE-COUNTDOWN CALIBRATION OF THE INVERTER OUTPUT VOLTAGE BY WAPCHE. | | | | | | |
| SYSTEM EFFECT-OPERATION TOO LOW. PHASE A VOLTAGE DROPPED FROM 114.0 VAC TO 113.4 VAC AT POWER CHANGEOVER. SPEC CALL 0 OUT A MINIMUM OF 113.0 VAC. NO DETRIMENTAL EFFECTS WERE NOTED. | | | | | | |

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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | STTC TIME DIP | PRI OTH | VEHICLE NAME PART NO |
|---|--|--------------------------------|---------------------|------------------|------------|----------------------------|
| VEHICLE EFFECT-NONE. | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | DA-829/02-840-1813 SENSOR | COMPOSITE-FRD/DPL | 13F 821108 | 6 | YES NO | |
| FAILURE MODE-OUT OF TOLERANCE. AC LOW VOLTAGE SENSOR DRIPTED TO 113.3 DROPOUT. SET POINT WAS 112.3. | | | | | | |
| SYSTEM EFFECT-NONE. PROBLEM IN AGE. | | | | | | |
| VEHICLE EFFECT-COMMIT SEQUENCE AND COMPOSITE ABORTED. | | | | | | |
| CORRECTIVE ACTION-SENSOR RESET TO 112.3VAC USING 400 CYCLE GENERATOR. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | A-80-14-147-F BATTERY-MAIN MISSILE | FAR 27-08160-3 | 621016 | WTR | NO NO | EAGLE-PICHER GAP 4064-3 |
| FAILURE MODE-REPORTED OUT OF TOLERANCE WHEN BATTERY VOLTAGE DROPPED TO 24.5 VDC DURING MISSILE TEST. THIS WAS LATER DETERMINED TO BE THE RESULT OF AN OVERLOAD CAUSED BY AN INCORRECTLY CONNECTED STAGING-CAMERA CIRCUIT. | | | | | | |
| CORRECTIVE ACTION-PERSONNEL WERE ADVISED TO TEST ANY CAMERA HARNESS FABRICATED IN THE FIELD PRIOR TO APPLICATION OF POWER. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | A-80-14-148-F INVERTER-ELECTRICAL, MAIN MISSILE | FAR 27-08178-1 | 621016 | WTR | NO NO | BENDIN 32877-21-M |
| FAILURE MODE-FAIL DURING OPERATION RESULTING FROM BINDING ROTOR CAUSED BY OVERLOAD WHEN AN INCORRECTLY CONNECTED STAGING CAMERA CIRCUIT SHORT CIRCUITED THE INVERTER. | | | | | | |
| CORRECTIVE ACTION-PERSONNEL INVOLVED IN THE STAGING CAMERA WIRING ERROR WERE ADVISED TO TEST ANY WIRING HARNESS FABRICATED IN THE FIELD BEFORE APPLICATION OF POWER. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | DA811/02-801-00-13 INVERTER | COMPOSITE-FRD/DPL | 13F 821016 | 6 | YES NO | |
| FAILURE MODE-SHORT (ELECTRIC). INVERTER OUTPUT SHORTED TO GROUND. | | | | | | |
| SYSTEM EFFECT-OPERATION TOO LOW. POWER WAS OUT OF SPECIFICATIONS 1.6 SECONDS AFTER TRANSFER TO INTERNAL. | | | | | | |
| VEHICLE EFFECT-COUNTDOWN ABORTED AND RESCHEDULED. | | | | | | |

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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | SITE TIME DIP | PRI OTH | VENDOR NAME VENDOR PART NO | |
|--|---|--------------------------------|---------------------|------------------|-----------------------------|-------------------------------|--------|
| CORRECTIVE ACTION-SHORT CORRECTED. | | | | | | | 994932 |
| ELECTRICAL-A/B POWER SOURCE | A-98-14-132F INVERTER | FAR 27-08178-3 | 821000 | | YES LELAND A/B PRO NO D. | YES LELAND A/B PRO NO D. | 998943 |
| FAILURE MODE-OUT OF SPECIFICATION. INVERTER WOULD NOT MEET VOLTAGE AND FREQUENCY SPECIFICATION IN AUTOMATIC CHECKOUT. | | | | | | | |
| CORRECTIVE ACTION-NONE TO INVERTERS. ALL SEVEN UNITS OPERATED SATISFACTORILY WHEN READJUSTED. INPUT FILTERS TO BE INSTALLED IN AUTOMATIC CHECKOUT EQUIPMENT AT BASES | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | /P4-450-04-113 INVERTER | COMPOSITE-B FACT | 113D 820926 | 114 | YES NO | | 997476 |
| FAILURE MODE-ERRATIC OPERATION. ESIV PHASE A VOLTAGE INDICATED STEPS AND FLUCTUATIONS THROUGHOUT THE TEST. ESIV, MISSILE 28 MCC, INDICATED VERY SMALL MOVEMENTS AT THE TIMES OF PHASE A SHIFTS. | | | | | | | |
| SYSTEM EFFECT-ERRATIC OPERATION. | | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | A-98-14-142-C INVERTER | FAR 27-81082 | 820917 | ALTUS | NO LELAND NO MGE-108-13 | | 994983 |
| FAILURE MODE-OUT OF TOLERANCE. CAUSED BY SENSOR TOLERANCES BEING TOO NARROW. INVERTER RETESTED AND PERFORMED PROPERLY. | | | | | | | |
| CORRECTIVE ACTION-FAILURE OF INVERTER NOT CONFIRMED. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | A-98-14-1517F INVERTER-ELECTRICAL MAIN MISSILE | FAR 27-08178-3 | 820913 | DYESS | NO LELAND NO MGE-108-13 | | 994971 |
| FAILURE MODE-REPORTED FAILED DURING OPERATION WHEN LAUNCH CONTROL SENSORS INDICATED A MALFUNCTION IN THE INVERTER CIRCUITS. FAILURE NOT CONFIRMED BY TEST UNDER SIMULATED MISSILE LOADS. PROBLEM WAS LATER TRACED TO ASSOCIATED LAUNCH COMPUTER CIRCUITRY. | | | | | | | |
| CORRECTIVE ACTION-NONE. | | | | | | | |

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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | DATE TIME DIP | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|---|--------------------------------|---------------------|------------------|------------|-----------------------------------|--------|
| ELECTRICAL-A/B POWER SOURCE | A-49-14-143-F INVERTER | FAR 7-08346-801 | 215-D 620828 | FACTORY | YES NO | YES LELAND NO MCE-108-13 | 094980 |
| FAILURE MODE-REPORTED OUT OF TOLERANCE WITH RESPECT TO FREQUENCY. CAUSED BY ERROR INTRODUCED BY A MALFUNCTIONING ME TER DURING MEASUREMENT. FAILURE NOT CONFIRMED. | | | | | | | |
| CORRECTIVE ACTION-FACTORY PERSONNEL REQUESTED TO CHECK ACCURACY OF METERS BEFORE REJECTING INVENTERS. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | A482-0081/P2-402-00-179 BATTERY | COUNTDOWN 27-08359-3 | 179D 620828 | -8420 | YES NO | | 094980 |
| FAILURE MODE-FAIL TO CEASE OPERATION AT PRESCRIBED TIME. BATTERY ACTIVATE READY LIGHT WOULD NOT EXTINGUISH. SYSTEM EFFECT-IMPROPER DISCRETE SIGNAL. BATTERY ACTIVATE READY LIGHT WOULD NOT EXTINGUISH. VEHICLE EFFECT-COUNTDOWN WAS DELAYED 40 MINUTES HOLD WAS REQUIRED TO CHANGE BATTERY AND CORRECT CIRCUITRY. CORRECTIVE ACTION-BATTERY WAS CHANGED / NO BATTERY ACTIVATE CIRCUITRY WAS CORRECTED. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | A482-0081/P2-401-00179 BATTERIES | COUNTDOWN | 179D 620828 | 12 -12840 | NO NO | | 095576 |
| FAILURE MODE-OUT OF SPECIFICATION. DURING A NO VOLTAGE CHECKS OF THE CANNON PLUG IN THE RSC SYSTEM, -2 VDC WAS FOUND D ON SEVERAL PIN COMBINATIONS DUE TO DEFECTIVE AGEN. DESTROYER BATTERIES. SYSTEM EFFECT-IMPROPER ANALOG SIGNALS. VOLTAGE WAS INTRODUCED TO THE ATLAS RSC HARNESS. VEHICLE EFFECT-COUNTDOWN ABORTED AND RESCHEDULED. TOTAL HOLD TIME WAS 113 MINUTES PRIOR TO TEST TERMINATION. CORRECTIVE ACTION-REPLACED AGENA BATTERIES. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | ETR LOCAL REPORT/P2-400-03-179 SIMULATOR, ELECTRICAL | COMPOSITE-B FACT | 179D 620822 | 12 -300 | NO NO | | 094290 |
| FAILURE MODE-ERRATIC OPERATION. FLUCTUATIONS OF 0.3 VOLTS MAXIMUM WERE OBSERVED ON MISSILE DC POWER. BATTERY SIMULAT OR WAS BEING UTILIZED. SYSTEM EFFECT-ERRATIC OPERATION. VEHICLE EFFECT-COMPOSITE DELAYED 56 MINUTES AT T-5 MINUTES. CORRECTIVE ACTION-DURING HOLD THE FLUCTUATIONS DECREASED AND THE COUNTDOWN WAS RESUMED. PRIOR TO NEXT TEST A MAIN MI SSILE BATTERY WAS INSTALLED SO THAT A TEST COULD BE RUN WITHOUT A BATTERY SIMULATOR CABLE. | | | | | | | |

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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI VENDOR NAME OTH VENDOR PART NO | |
|---|---|--------------------------------|---------------------|------------------|--|--------|
| ELECTRICAL-A/B POWER SOURCE | A-9P-14-133-F INVERTER-ELECTRICAL MAIN MISSILE | FAR 27-06176-3 | 620817 | NAF8 | YES LELAND NO MCE-106-13 | 894886 |
| FAILURE MODE-REPORTED FAILED DURING OPERATION DUE TO EXCESSIVE NOISE OUTPUT. FAILURE NOT CONFIRMED DURING FAILURE ANALYSIS. ALL PARAMETERS WERE WITHIN SPECIFICATIONS UNDER SIMULATED MISSILE LOADS. THIS FAILURE MODE IS APPLICABLE TO ONE ADDITIONAL PART NUMBER ITEM. | | | | | | |
| CORRECTIVE ACTION-EVIDENCE INDICATED THAT THE EXCESSIVE NOISE PROBABLY EMANATED FROM THE ARMA GUIDANCE SYSTEM WHICH WOULD GIVE SIMILAR FAIL INDICATIONS. BASE PERSONNEL WERE ADVISED NOT TO REJECT INVERTERS FOR THIS FAILURE MODE UNITS L ASSOCIATED CIRCUITRY HAS BEEN CHECKED. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | A-9P-14-144-F INVERTER | FAR 27-06176-3 | 620808 | WALKER | NO LELAND NO MCE-106-13 | 894887 |
| FAILURE MODE-OUT OF TOLERANCE. STARTING CURRENT OF OVER 550 AMPS WAS REPORTED. FAILURE NOT CONFIRMED SINCE NORMAL STARTING CURRENT IS OVER 800 AMPS FOR APPROXIMATELY 1.8 SECONDS. | | | | | | |
| CORRECTIVE ACTION-FIELD PERSONNEL WERE NOTIFIED THAT A STARTING CURRENT OF MORE THAN 800 AMPS IS NORMAL. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | A-9M-14-134F MAIN MISSILE INVERTER | FAR 27-06176-3 | 620800 | | YES LELAND A/B PRO NO D. MCE106-13 | 894888 |
| FAILURE MODE-OUT OF TOLERANCE. THREE INVERTERS REJECTED DUE TO LOW VOLTAGE OUTPUT. | | | | | | |
| CORRECTIVE ACTION-NEW DIODE TYPES OR SERIES DIODES RECOMMENDED BUT DISAPPROVED BY AIR FORCE. NO ACTION TAKEN. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | A-9M-14-141P BATTERY | FAR 27-06358-3 | 620791 | SCHELLIN | YES YARDNEY NO 6AP-4064 | 894889 |
| FAILURE MODE-SHORT-ELECT- ELECTROLYTE LOST FROM BATTERY AFTER TEST COMPLETION. LEAKAGE OF ELECTROLYTE WAS ATTRIBUTED TO ELECTRICAL SHORT WITHIN BATTERY WHICH OCCURRED AFTER COUNTDOWN. | | | | | | |
| CORRECTIVE ACTION-BATTERY TO BE REMOVED FROM MISSILE AS SOON AS POSSIBLE AFTER TEST COMPLETION. CARBON DEPOSITS CAUSING INTERNAL BATTERY SHORTS DURING HIGH CURRENT USAGE. BATTERY TEMPERATURE AND PRESSURE BUILDS UP TO EXPLODE ELECTROLYTE. | | | | | | |

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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | SITE TIME DIP | PRI OTH | VENDOR NAME VENDOR PART NO | |
|--|---|--------------------------------|---------------------|------------------|------------|--------------------------------------|--------|
| ELECTRICAL-A/B POWER SOURCE | HG-AB-14-123F UMBILICAL RECEPTACLE | FAR 27-81908-827 | 920784 | FACTORY | YES | CANNON | 999022 |
| FAILURE MODE-OUT OF SPECIFICATION. MISALIGNMENT OF THE MATED PART. | | | | | | | |
| CORRECTIVE ACTION-NONE. HG-AB-14-80 AND HG-AB-14-803 RECOMMENDED RECEPTACLE REDESIGN AND UPDATING OF SURVEY INSTRUCTION 97-82 TO PREVENT THIS TYPE OF FAILURE. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | A-9L-14-129F INVERTER | FAR 27-08178-3 | 920714 | LINCOLN | YES | LELAND A/B PRO NO D. MCE108-15 | 999048 |
| FAILURE MODE-OUT OF TOLERANCE. LARGE SPIKES ON THE OUTPUT WAVE FORM. RESULTED IN EXCESSIVE VOLTAGE READING. | | | | | | | |
| CORRECTIVE ACTION-NONE TO INVERTER, FAILURE WAS NOT CONFIRMED BY TEST. PERSONNEL AT BASE NOTIFIED TO LOOK ELSEWHERE FOR CAUSE OF FAILURE. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | A-9R-14-127F INVERTER | FAR 27-08178-3 | 44F 920712 | WALKER | YES | LELAND A/B PRO NO D. MCE108-15 | 999050 |
| FAILURE MODE-OUT OF SPECIFICATION. COULD NOT REMAIN WITHIN FREQUENCY SPECIFICATION. | | | | | | | |
| CORRECTIVE ACTION-NONE. THE INVERTER FAILURE WAS NOT CONFIRMED BY TEST. TEST SENSORS AT BASE TO BE CHECKED. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | A-9S-14-121F MAIN MISSILE INVERTER | FAR 27-08178-3 | 97F 920707 | FACTORY | YES | LELAND AIRBORN NO E | 999060 |
| FAILURE MODE-FAIL DURING OPERATION. ARMA YAW-STEERING FAILED TO PERFORM PROPERLY. THE REPORTED FAILURE WAS UNCONFIRMED BY FAILURE ANALYSIS. | | | | | | | |
| CORRECTIVE ACTION-NONE. THE PROBABLE FAILURE CAUSE MIGHT HAVE BEEN INTER-SYSTEM INCOMPATIBILITY. THIS ACTIVITY WILL BE KEPT UNDER SURVEILLANCE. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | DAT16/02-SMO-01-87 INVERTER | COMPOSITE-FRD/DPL | 97F 920706 | OUTER | NO | NO | |
| FAILURE MODE-FAIL TO OPERATE AT PRESCRIBED TIME. LAUNCH CONTROL SYSTEM CHASSIS A87 (MISSILE GROUND POWER) WAS LOOSE AND PREVENTED THE INVERTER FROM STARTING. | | | | | | | |

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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|---|--------------------------------|---------------------|------------------|------------|--------------------------------------|--------|
| ELECTRICAL-A/B POWER SOURCE | A-90-14-118F MAIN MISSILE INVERTER | FAR 27-06188-3 | 620612 | LINCOLN | YES | LELAND AIRBORN NO E | 095606 |
| FAILURE MODE-FAIL DURING OPERATION. INVERTER FAIL LIGHT CAME ON DURING PROPELLANT LOADING. THIS FAILURE WAS NOT CONFIRMED DURING FAILURE ANALYSIS. | | | | | | | |
| CORRECTIVE ACTION-NONE. INVERTERS WILL BE KEPT UNDER SURVEILLANCE. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | A-90-14-118F MAIN MISSILE INVERTER | FAR 27-06176-3 | 620611 | LINCOLN | YES | LELAND AIRBORN NO E | 095607 |
| FAILURE MODE-OUT OF SPECIFICATION. INVERTER OUTPUT FREQUENCY AND VOLTAGE WAS OUT OF SPECIFICATION. THIS FAILURE WAS NOT CONFIRMED BY FAILURE ANALYSIS. | | | | | | | |
| CORRECTIVE ACTION-FIELD PERSONNEL WERE REQUESTED TO CHECK THEIR SENSORS. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | A-90-14-118F MAIN MISSILE INVERTER | FAR 27-06176-3 | 620603 | SCHILLIN 6 | YES | LELAND AIRBORN NO E | 095609 |
| FAILURE MODE-OUT OF SPECIFICATION. THE INVERTERS OUTPUT FREQUENCY AND VOLTAGE WAS OUT OF SPECIFICATION. THIS FAILURE WAS NOT CONFIRMED BY FAILURE ANALYSIS. | | | | | | | |
| CORRECTIVE ACTION-FIELD PERSONNEL WERE REQUESTED TO CHECK THEIR SENSORS. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | A-90-14-118F MAIN MISSILE INVERTER | FAR 27-06176-3 | 620603 | DYESS | YES | LELAND AIRBORN NO E MGE-108-18 | 095609 |
| FAILURE MODE-OUT OF SPECIFICATION. INVERTER OUTPUT FREQUENCY AND VOLTAGE WAS OUT OF SPECIFICATION. THIS FAILURE WAS NOT CONFIRMED BY FAILURE ANALYSIS. | | | | | | | |
| CORRECTIVE ACTION-FIELD PERSONNEL WERE REQUESTED TO CHECK THEIR SENSORS. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | A-90-117F MAIN MISSILE BATTERY | FAR 27-06889-3 | 1180 620889 | WTR | YES | EASLE PITCHER NO | |
| FAILURE MODE-FAIL TO OPERATE AT PRESCRIBED TIME. BATTERY WAS FOUND TO HAVE BEEN ACTIVATED PREVIOUSLY. | | | | | | | |

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| SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | SITE TIME DIP | PRI OTH | VENDOR NAME VENDOR PART NO |
|---|---|--------------------------------|---------------------|------------------|------------|-------------------------------|
| CORRECTIVE ACTION-RECOMMENDED THAT FIELD PERSONNEL INTERROGATE THE BATTERY MONITOR CIRCUIT PRIOR TO BATTERY INSTALLATION ON THE MISSILE. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | A-9M-14-118F MAIN MISSILE INVERTER | FAR 27-08178-1 | 820524 | LINCOLN | YES NO | BENDIX |
| FAILURE MODE-OUT OF SPECIFICATION. INVERTER OUTPUT VOLTAGE LOW. THIS FAILURE IS UNCONFIRMED BY FAILURE ANALYSIS. THE FAILURE WAS A RESULT OF INCOMPATIBILITY BETWEEN LAUNCH OFFICERS CONSOLE AND MAPCHE. | | | | | | |
| CORRECTIVE ACTION-MODIFICATION OF MAPCHE DECKS IN ACCORDANCE WITH ECP 3103. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | A-9M-14-118F MAIN MISSILE INVERTER | FAR 27-08178-1 | 820523 | LINCOLN | YES NO | BENDIX NO 32877-21A |
| FAILURE MODE-OUT OF SPECIFICATION. INVERTER OUTPUT VOLTAGE LOW. THIS FAILURE IS UNCONFIRMED BY FAILURE ANALYSIS. THE REPORTED FAILURE WAS A RESULT OF INCOMPATIBILITY BETWEEN LAUNCH OFFICERS CONSOLE AND MAPCHE. | | | | | | |
| CORRECTIVE ACTION-MODIFICATION OF MAPCHE DECKS IN ACCORDANCE WITH ECP 3103. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | A682-0553/B3 INVERTER | FLIGHT | 127D 020511 | B-3 -18.9 | YES NO | |
| FAILURE MODE-OUT OF SPECIFICATION. AT CHARGE COVER FROM EXTERNAL TO INTERNAL MISSILE POWER THE INVERTER VOLTAGE EXPERIENCED AN APPROXIMATE 2 VAC OUTPUT INCREASE AND THE VOLTAGE REMAINED SLIGHTLY ABOVE SPECIFICATION THROUGHOUT FLIGHT. | | | | | | |
| SYSTEM EFFECT-OPERATION TOO HIGH. | | | | | | |
| VEHICLE EFFECT-IMPROPER TRAJECTORY. THE HIGH AC VOLTAGE TO THE MISSILE AUTOPILOT RESULTED IN A SLIGHT EXCESS IN PIT CHOICE DURING FLIGHT. | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | A-9M-14-109F MAIN MISSILE INVERTER | FAR 27-08178-5 | 820425 | DYESS | YES NO | LELAND AIRBORNE E |
| FAILURE MODE-OUT OF SPECIFICATION. INVERTERS OUTPUT FREQUENCY WAS REPORTED BY MAPCHE BUT UNCONFIRMED BY FAILURE ANALYSIS. | | | | | | |

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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | SITE TIME DIP | PRI OTH | VENDOR NAME VENDOR PART NO | |
|--------------------------------|---|--------------------------------|---------------------|------------------|------------|-------------------------------|-----------|
| | CORRECTIVE ACTION-ECP 8041 PROVIDES A FILTERED CHECK POINT OF THE INVERTER OUTPUT FOR MAPCHE WHICH SHOULD FILTER UNWANTED HARMONICS THAT HAVE TRIGGERED MAPCHE WITH FALSE INDICATION. | | | | | | 895793 |
| ELECTRICAL-A/B POWER SOURCE | A-9M-14-110F MAIN MISSILE INVERTER | FAR 27-06178-1 | 820416 | SHILLING | NO | BENDIX | 895804 |
| | FAILURE MODE-OUT OF SPECIFICATION. INVERTER OUTPUT VOLTAGE LOW. THIS FAILURE IS UNCONFIRMED BY FAILURE ANALYSIS. THE REPORTED FAILURE WAS A RESULT OF INCOMPATIBILITY BETWEEN LAUNCH OFFICERS CONSOLE AND MAPCHE. | | | | | | |
| | CORRECTIVE ACTION-MODIFICATION OF MAPCHE DECKS IN ACCORDANCE WITH ECP 3103. | | | | | | 896700 |
| ELECTRICAL-A/B POWER SOURCE | AE62-0316/83-401-00-129 INVERTER | COUNTDOWN | 1290 820411 | B-3 | YES NO | | |
| | FAILURE MODE-OUT OF TOLERANCE. INVERTER OUTPUT HIGH AFTER TRANSFER TO INTERNAL. | | | | | | |
| | SYSTEM EFFECT - OPERATION TOO HIGH. HIGH PHASE A VOLTAGE. | | | | | | |
| | VEHICLE EFFECT-NONE. | | | | | | |
| | CORRECTIVE ACTION-NONE. | | | | | | 894990 |
| ELECTRICAL-A/B POWER SOURCE | AE62-0316/83-401-00-129 INVERTER | FLIGHT | 1290 820411 | B-3 -30 | YES NO | | |
| | FAILURE MODE-OUT OF SPECIFICATION OR TOLERANCE THE MISSILE INVERTER VOLTAGE WAS SET ABOVE TOLERANCE. THE VOLTAGE WAS SET TO 117.5 VAC. TOLERANCE IS 115.3 TO 116.7 VAC. | | | | | | |
| | SYSTEM EFFECT-OPERATION TOO HIGH. PHASE A VOLTAGE REMAINED AT A HIGHER THAN NORMAL VALUE THROUGHOUT THE FLIGHT. | | | | | | |
| | VEHICLE EFFECT-IMPROPER TRAJECTORY THE HIGH VOLTAGE AFFECTED THE FLIGHT CONTROL SYSTEM AND CAUSED A GREATER PITCHOVER THAN WAS PLANNED, RESULTING IN A CHANGE IN TRAJECTORY. MISSION WAS SUCCESSFULLY ACCOMPLISHED. | | | | | | |
| | CORRECTIVE ACTION-NONE. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | HC-98-14-114F MAIN MISSILE BATTERY | FAR 27-06359-3 | 820409 | ETR | YES | EAGLE PITCHER NO | |
| | FAILURE MODE-FAIL TO OPERATE AT PRESCRIBED TIME. LOW TEMPERATURE THERMOSTAT WOULD NOT CLOSE AT 68 DEGREES FAHRENHEIT. | | | | | | |
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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SIZE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|--|---|---------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| CORRECTIVE ACTION-RELIABILITY GENERATED PAR H6-98-14-801 REQUESTING THE VENDOR TO TAKE IMMEDIATE CORRECTIVE ACTION. | | | | | | | 993610 |
| ELECTRICAL-A/B POWER SOURCE | DA707/E1-8MO-08-13 INVERTER | COMPOSITE-FRD/DPL 27-06178-1 | 13F 82040T | E | YES NO | BENDIX 22877-21A | 99427 |
| FAILURE MODE-FAILED DURING OPERATION. INVERTER FAIL INDICATION RECEIVED AT POWER TRANSFER TO INTERNAL. SYSTEM EFFECT-OPERATION DOES NOT START. MISSILE FAILED TO TRANSFER TO INTERNAL POWER DURING COMMIT SEQUENCE. VEHICLE EFFECT-COMPOSITE ABORTED AND RESCHEDULED. CORRECTIVE ACTION-UNKNOWN. (FAR 90-14-110) | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | DA707/E1-8MO-03-13 INVERTER | COMPOSITE-FRD/DPL 27-06178-1 | 13F 820406 | WTR | YES NO | BENDIX 22877-21A | 99800 |
| FAILURE MODE-FAIL DURING OPERATION. INVERTER FAIL INDICATION RECEIVED AT POWER TRANSFER TO INTERNAL. SYSTEM EFFECT-OPERATION DOES NOT START. MISSILE FAILED TO TRANSFER TO INTERNAL POWER DURING COMMIT SEQUENCE. VEHICLE EFFECT-COMMIT SEQUENCE AND COMPOSITE ABORTED. CORRECTIVE ACTION-UNKNOWN. (FAR 90-14-110) | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | A-9D-14-110F MAIN MISSILE INVERTER | FAR 27-06178-1 | 13F 820406 | WTR | YES NO | BENDIX | 998764 |
| FAILURE MODE-OUT OF SPECIFICATION. INVERTER OUTPUT VOLTAGE REPORTED LOW. UNCONFIRMED BY FAILURE ANALYSIS. AN IDENTICAL FAILURE OCCURRED WITH A SECOND PART NUMBER ON THE SAME MISSILE. CORRECTIVE ACTION-AN ATTEMPT WILL BE MADE TO DUPLICATE THE TEST AT ANOTHER SITE. GO/C TO CONTINUE STUDY OF THE PROBLEM. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AA82-0046/P84CO-03-F1 MAIN MISSILE BATTERY | COMPOSITE-J FACT 27-06359-3 | 104D 820329 | 36A | YES NO | EAGLE-PITCHER 6AP 4000A | |
| FAILURE MODE-SHORT-ELECT. THE MAIN BATTERY DROPPED 2 VDC AFTER ACTIVATION. PRIOR TO STABILIZING AT 29.9 VDC A DROP OF NO MORE THAN 1 VDC IS EXPECTED. THE CAUSE OF THIS DROP WAS A SHORTED CELL IN THE BATTERY. SYSTEM EFFECT-OPERATION TOO LOW. THE MAIN BATTERY DROPPED 2 VDC AFTER ACTIVATION PRIOR TO STABILIZING AT 29.9 VDC. A DROP OF NO MORE THAN 1 VDC IS EXPECTED. VEHICLE EFFECT-COMPOSITE DELAYED. 8 MINUTES RECTLE. | | | | | | | |

GENERAL DYNAMICS
CONVAIR DIVISION

15 JUN 1966

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYS- SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF TIME | SITE DIF TIME | PRI OTH | VENDOR NAME VENDOR PART NO |
|--|---|----------------------------------|--------------------------|------------------|-----------------------------|-------------------------------|
| CORRECTIVE ACTION-NONE. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | ARI41-0-1-124/PC-ACO-02-124 INVERTER | COMPOSITE-FACTORY 7-06349-801 | 1240 620328 | | NO LELAND NO | 994800 |
| FAILURE MODE-OUT OF TOLERANCE. THE INVERTER OUTPUT VOLTAGE WAS 118.2 VAC. A MAXIMUM OF 117 VAC IS ALLOWED. THIS PROBLEM RESULTED FROM USING A VOLTMETER NOT HAVING A CALIBRATION CURVE, TO SET UP THE INVERTER OUTPUT. | | | | | | |
| SYSTEM EFFECT-OPERATION TOO HIGH. | | | | | | |
| VEHICLE EFFECT-COMPOSITE RESCHEDULED. PARTIAL COMPOSITE RETEST PERFORMED. | | | | | | |
| CORRECTIVE ACTION-THE INVERTER WAS RE-ADJUSTED AND THE PROCEDURE CHANGED TO USE THE ELECTRICAL SYSTEM TEST EQUIPMENT T METER TO SET UP THE INVERTER OUTPUT. THIS METER HAS A CALIBRATED CORRECTION FACTOR CURVE. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | CT-98-14-002F MAIN MISSILE INVERTER | FAR 7-06349-801 | 620319 | ETR | YES LELAND AIRBORNE NO E | 995834 |
| FAILURE MODE-OUT OF SPECIFICATION, REPORTED BUT NOT CONFIRMED BY FAILURE ANALYSIS. | | | | | | |
| CORRECTIVE ACTION-NONE. ANALYSIS DETERMINED THAT A HUMAN ERROR HAD OCCURRED. HAD THE SYSTEM BEEN CHECKED MORE THOROUGHLY THE FAILURE MIGHT NOT HAVE BEEN REPORTED. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AA62-0045/P6-4CO-04-F1 INVERTER | COMPOSITE-J FACT 7-06349-801 | 1040 620317 | 36A | NO LELAND NO MCE108-14 | 994789 |
| FAILURE MODE-ERRATIC OPERATION. PHASE A VOLTAGE WAS VARYING 0.4 VAC PEAK-TO-PEAK AT 0.2 CPS. THIS OCCURRED ALSO AFTER CHANGING THE INVERTER. THE PROBLEM ONLY OCCURRED ON INTERNAL POWER. | | | | | | |
| SYSTEM EFFECT-ERRATIC OPERATION. PHASE A VOLTAGE WAS VARYING 0.4 VAC PEAK-TO-PEAK AT 0.2 CPS ON INTERNAL POWER. | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | |
| CORRECTIVE ACTION-SUSPECTED INTERACTION BETWEEN 6/RO HEATER MAGNETIC AMPLIFIERS AND INVERTER MAGNETIC AMPLIFIER. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 3P-98-14-105F MAIN MISSILE INVERTER | FAR 7-06349-801 | 1040 620307 | ETR | YES LELAND AIRBORNE NO E | |
| FAILURE MODE-OUT OF SPECIFICATION. INVERTER OUTPUT VOLTAGE AND FREQUENCY FLUCTUATION. THE REPORTED FAILURE WAS NOT CONFIRMED BY FAILURE ANALYSIS. | | | | | | |

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GENERAL DYNAMICS
CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|--|---|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| CORRECTIVE ACTION-FIELD SUPERVISION WAS REQUESTED TO RECHECK INVERTER TEST EQUIPMENT FOR PROPER OPERATION. | | | | | | | 893796 |
| ELECTRICAL-A/B POWER SOURCE | AR141-0-1-128/PC-4CO-01-128 INVERTER | COMPOSITE-FACTORY | 1280 820303 | | NO | LELAND NO | 893867 |
| FAILURE MODE-OUT OF TOLERANCE. THE INTERNAL AC VOLTAGE, PHASE A, INDICATED VOLTAGES EQUAL TO AND BELOW THE MINIMUM TOLERANCE OF 113 VAC FOR APPROXIMATELY 3 SECONDS FOLLOWING POWER CHANGE-OVER TO INTERNAL. | | | | | | | |
| SYSTEM EFFECT-OPERATION TOO LOW. | | | | | | | |
| VEHICLE EFFECT-COMPOSITE RE-SCHEDULED. SYSTEMS LEVEL AND COMPOSITE RETESTING REQUIRED. | | | | | | | |
| CORRECTIVE ACTION-THE INVERTER OUTPUT WAS READJUSTED. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | A98-14-108P MAIN MISSILE INVERTER | FAR 27-06178-3 | 59F 820303 | DYES8 | YES | LELAND AIRBORN NO E | 893841 |
| FAILURE MODE-OUT OF SPECIFICATION. INVERTER OUTPUT FREQUENCY AND VOLTAGE WAS REPORTED BY MAPCHE BUT NOT CONFIRMED BY FAILURE ANALYSIS. | | | | | | | |
| CORRECTIVE ACTION-ECF 8041 PROVIDES A FILTERED CHECK POINT OF THE INVERTER OUTPUT FOR MAPCHE WHICH SHOULD FILTER UNWANTED HARMONICS THAT HAVE TRIGGERED MAPCHE WITH FALSE INDICATION. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AD62-0018/DA673/01-302-00-88 INVERTER | COUNTDOWN 27-06178-3 | 66E 820223 | P | YES | LELAND NO M9E108-13 | 893834 |
| FAILURE MODE-FAIL DURING OPERATION. A MISSILE INVERTER FAULT WAS RECEIVED 25 SECONDS AFTER COMMIT START DUE TO A MAJOR INVERTER VOLTAGE (117.3VDC). | | | | | | | |
| SYSTEM EFFECT-OPERATION TOO HIGH. | | | | | | | |
| VEHICLE EFFECT-COUNTDOWN ABORTED AND RESCHEDULED. | | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | DA673-02-84P-19-03 INVERTER | COMPOSITE-PRO/DPL | 3F 820217 | 6 | NO | NO | |
| FAILURE MODE-OUT OF TOLERANCE. MISSILE INVERTER VOLTAGE INDICATOR WENT RED. | | | | | | | |
| SYSTEM EFFECT-NONE. | | | | | | | |
| VEHICLE EFFECT-COUNTDOWN ABORTED AND RE-SCHEDULED. | | | | | | | |

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CONVAIR DIVISION

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DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | SITE TIME DIP | PRI OTH | VENDOR NAME VENDOR PART NO | |
|--|--|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| CORRECTIVE ACTION-COMPARETOR READJUSTED. | | | | | | | 894822 |
| ELECTRICAL-A/B POWER SOURCE | A-9F-14-089F BATTERY | FAR 27-06359-3 | 62012 | WARREN | YES NO | YES EAGLE PITCHER | 894899 |
| FAILURE MODE-ELECTRICAL SHORT CIRCUITING CAUSED EXCESSIVE HEATING AND ULTIMATE BATTERY DESTRUCTION. | | | | | | | |
| CORRECTIVE ACTION-RELIABILITY GENERATED RAR 9F-14-851 RECOMMENDING DESIGN CHANGES AND IMPROVED VENDOR QUALITY CONTR. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AL62-0193/B2-4MO-01-137 UNBILICAL CONNECTOR | COMPOSITE-FRD/DPL | 137D 820208 | B2 | YES NO | | 893324 |
| FAILURE MODE-OPEN ELECT. FAILURE TO TRANSFER TO INTERNAL PRESSURE CAUSED COMMIT STOP. FAILURE CAUSED BY AN OPEN CIRCUIT IN J1001. | | | | | | | |
| SYSTEM EFFECT-OPERATION DOES NOT START. | | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | | |
| CORRECTIVE ACTION-NONE. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | A-9B-18-030F BATTERY | FAR 7-08380-N | 62012 | ETH | YES NO | YES YARDNEY | 893961 |
| FAILURE MODE-SHORT (ELECT). BATTERY WAS CHARGED WHEN RECEIVED AT ETR ON 12-14-61. ON 1-31-62 AN INTERNAL SHORT WAS DETECTED IN ONE OF THE NINETEEN CELLS. | | | | | | | |
| CORRECTIVE ACTION-IN FEBRUARY 1962 ONE DEPARTMENT ACCEPTED RESPONSIBILITY OF MAINTAINING AN OPTIMUM QUANTITY OF THE BATTERIES AT THE SITE. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | H6-9B-14-097F BATTERY | FAR 27-06359-3 | 62012 | ETR | YES NO | YES EAGLE PITCHER C | 894899 |
| FAILURE MODE-ELECTRICAL SHORT CIRCUIT IN THE BATTERY ACTIVATE CIRCUIT. PROLONGED ACTIVATE CURRENT WAS DRAWN. ACTIVATE CIRCUIT NORMALLY WILL OPEN FOLLOWING ACTIVATE. BATTERY WAS PROPERLY ACTIVATED. | | | | | | | |
| CORRECTIVE ACTION-VENDOR WILL REMOVE (THE COMMON WIRE) FROM THE IMMEDIATE AREA OF THE ACTIVATE RESISTOR BLOCK. THIS WILL ELIMINATE RECURRENT OF THIS FAILURE. 60/C WILL CHANGE BATTERY ACTIVATE PROCEDURE TO TURN OFF ACTIVATION POWER AFTER 5 SECONDS). | | | | | | | |

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CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | IFST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE OF TIME | SITE TIME | PRI OTH | VENDOR NAME VENDOR PART NO |
|--|---|--------------------------------|-------------------------|------------------|------------|-------------------------------|
| ELECTRICAL-A/B POWER SOURCE | AE82-0073/83-401-00-132 INVERTER | FLIGHT | 1320 020123 | B-3 27 | NO NO | 0897221 |
| FAILURE MODE-OUT OF EXPECTED VALUE. PHASE A VOLTAGE WAS ABOVE NOMINAL SPECIFIED VOLTAGE. | | | | | | |
| SYSTEM EFFECT-OPERATION TOO HIGH. PHASE A VOLTAGE WAS ABOVE NOMINAL. EXCESS VOLTAGE. | | | | | | |
| VEHICLE EFFECT-IMPROPER TRAJECTORY. THE ABOVE-NOMINAL PHASE A VOLTAGE THROUGHOUT BOOSTER PHASE CAUSED 1.7 DEGREES EXCESSIVE PITCH-DOWN TO EFFECT OF VOLTAGE LEVEL ON PITCH PROGRAM. HOWEVER, THERE WAS NO EFFECT ON IMPACT PREDICTION. | | | | | | |
| CORRECTIVE ACTION-NONE-UNKNOWN. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AE82-0073/83-401-00-132 INVERTER | FLIGHT | 1320 020123 | B-3 286 | YES NO | 0897224 |
| FAILURE MODE-ERRATIC OPERATION. INVERTER FREQUENCY DISPLAYED TRANSITORY INCREASES AT SECO AND VECO. LEVELS WERE SATISFACTORY BEFORE AND AFTER THE TRANSIENTS. | | | | | | |
| SYSTEM EFFECT-NONE. | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | |
| CORRECTIVE ACTION-NONE. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AGH-14-100P INVERTER | FAR 27-08176-3 | 20F 020119 | SHILLING NO E | YES NO | 0897226 |
| FAILURE MODE-OUT OF TOLERANCE. JAPANESE INDICATED INVERTER OUTPUT FREQUENCY OUT OF TOLERANCE. THE REPORTED FAILURE WAS NOT CONFIRMED IN FAILURE ANALYSIS. | | | | | | |
| CORRECTIVE ACTION-RELIABILITY RAR 9M-14-091 WAS GENERATED REQUESTING THAT A NEW INVERTER TEST POINT BE DESIGNATED WHICH WILL PROVIDE FILTER BENEFIT. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AE82-0074/82-401-00-125 INVERTER | FLIGHT | 1230 020117 | B-2 27 | YES NO | 0897228 |
| FAILURE MODE-OUT OF SPECIFICATION. PHASE A VOLTAGE WAS SLIGHTLY ABOVE SPECIFICATION THROUGHOUT FLIGHT. MAXIMUM VOLTAGE REACHED WAS 117 VACAT SECO AND BECO. | | | | | | |
| SYSTEM EFFECT-OPERATION TOO HIGH. | | | | | | |
| VEHICLE EFFECT-IMPROPER TRAJECTORY. THE SLIGHTLY HIGH AC VOLTAGE TO FLIGHT CONTROL RESULTED IN ANGULAR DISPLACEMENT 8 IN PITCH AND YAW IN EXCESS OF NOMINAL BY 2.8 AND 3.3 DEGREES, RESPECTIVELY, AT SECO. | | | | | | |

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CONVAIR DIVISION

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DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | SITE TIME DIP | PRI OTH | VENDOR NAME VENDOR PART NO |
|--|--|--------------------------------|---------------------|------------------|------------|-------------------------------|
| CORRECTIVE ACTION-UNKNOWN. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | A-9L-14-09SP INVERTER | PAR 27-08178-3 | 34F 620113 | LINCOLN | YES | LELAND AIRBORN NO E |
| FAILURE MODE-OUT OF TOLERANCE. MAPCME INDICATED INVERTER OUTPUT FREQUENCY EXCESSIVELY HIGH. THE REPORTED FAILURE WAS NOT CONFIRMED IN FAILURE ANALYSIS. | | | | | | |
| CORRECTIVE ACTION-RELIABILITY PAR 9M-14-691 WAS GENERATED REQUESTING THAT A NEW INVERTER TEST POINT BE DESIGNATED WITH ELECTRICAL FILTER BENEFIT. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AE61-1275/LB-401-00-114 INVERTER | FLIGHT | 114D 611222 | 1-2 -83.9 | YES | LELAND NO |
| FAILURE MODE-OUT OF EXPECTED VALUE. PHASE A VOLTAGE DROPPED TO 113.2 VAC AT POWER CHANGEOVER TO INTERNAL. WAS 113.4 VAC AT LIFTOFF AND DECREASED STEADILY TO 112.8 VAC BY BECO. VOLTAGE WAS STEADY LOW AT 112.8 VAC THROUGH SUSTAINER PHASE. DIFFICULTY ATTRIBUTED TO LOW INVERTER OUTPUT REGULATOR SETTING AS A RESULT OF USE OF BATTERY SIMULATOR CABLE A NO POOR SENSOR LOCATION. | | | | | | |
| SYSTEM EFFECT-OPERATION TOO LOW. PHASE A OUTPUT TO USER SYSTEMS WAS LOW THROUGHOUT FLIGHT. | | | | | | |
| VEHICLE EFFECT-IMPROPER TRAJECTORY. LOWER THAN NOMINAL AC VOLTAGE TO FLIGHT CONTROL SYSTEM RESULTED IN A PITCHOVER DEFICIENCY OF 1.6 DEGREES AT BECO. THIS MAY HAVE AMOUNTED TO 2.5 DEGREES IF NOT COMPENSATED BY OTHER DEVIATIONS. GUIDANCE CONTROL IN SUSTAINER PHASE CORRECTED VEHICULAR CUTOFF VELOCITY TO ALLOW FOR DEFICIENT PITCHOVER. | | | | | | |
| CORRECTIVE ACTION-CHANGE IN LOCATION OF LAUNCH CONTROL LOGIC DC SENSORS TO INVERTER INPUT TO PREVENT MIS-SETTING OF INVERTER REGULATOR. ALSO PLANNED TO TIGHTEN AC VOLTAGE COMPARTOR TOLERANCE. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AE61-1231/PB-301-00-38 INVERTER REGULATOR | FLIGHT | 36E 611219 | 13 82 | NO NO | |
| FAILURE MODE-OUT OF SPECIFICATION. PHASE A VOLTAGE DRIFTED BELOW THE SPECIFIED MINIMUM OF 113.28 VAC AND REMAINED BELOW 112.8 VAC AT BECO SPECIFICATION UNTIL BECO (302 SECONDS). THE LOW VOLTAGE WAS CAUSED BY A LOW SETTING OF THE MAPCME AMPPLIFIER REGULATOR OF THE INVERTER. | | | | | | |
| SYSTEM EFFECT-NONE. PHASE B AND C, AND THE BATTERY VOLTAGE WERE WITHIN SPECIFICATIONS THROUGHOUT FLIGHT. | | | | | | |
| VEHICLE EFFECT-NONE. PHASE A VOLTAGE WAS NOT LOW ENOUGH TO CAUSE ANY DIFFICULTIES. | | | | | | |
| CORRECTIVE ACTION-NONE. NO CORRECTIVE ACTION REQUIRED. | | | | | | |

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CONVAIR DIVISION

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DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|--|--|---------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| ELECTRICAL-A/B POWER SOURCE | AR141-0-1-142/PC-4CO-03-142 INVERTER | COMPOSITE-FACTORY 27-08349-3 | 142D 811218 | | NO NO | BENDIX | 899430 |
| FAILURE MODE-OUT OF TOLERANCE. THE ELECTRICAL INVERTER WAS REPLACED AFTER BEING SUBJECTED TO AN OUT OF TOLERANCE VOLTAGE OF 35.5 VDC. MAXIMUM ALLOWABLE INPUT VOLTAGE TO THE INVERTER IS 30 VDC. | | | | | | | |
| SYSTEM EFFECT-NONE. | | | | | | | |
| VEHICLE EFFECT-COMPOSITE DELAYED. INVERTER REPLACED AND POST COMPOSITE TEST MADE TO SHOW PROPER OPERATION. | | | | | | | |
| CORRECTIVE ACTION-INVERTER REPLACED WITH ONE WHICH HAD NOT BEEN SUBJECTED TO EXCESSIVE VOLTAGE. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | A141-0202/P3-301-00-35 MAIN MISSILE BATTERY | COUNTDOWN | 35E 811330 | 13 -4220. | YES NO | | 894042 |
| FAILURE MODE-OUT OF SPECIFICATION. DURING AN ATTEMPTED LAUNCH, THE MAIN MISSILE BATTERY INDICATED VOLTAGE FLUCTUATIONS AND A BELOW REDLINE VALUE WHEN INTERNAL LOADS WERE APPLIED. | | | | | | | |
| SYSTEM EFFECT-OPERATION TOO LOW. VOLTAGE OF MAIN MISSILE BATTERY BELOW RED-LINE VALUE. (EXACT VALUE NOT KNOWN). | | | | | | | |
| VEHICLE EFFECT-COUNTDOWN DELAYED. A REPLACEMENT BATTERY WAS INSTALLED AND CHECKED OUT AS ACCEPTABLE. COUNTDOWN WAS RESUMED BUT LATER ABORTED DUE TO R/V TELEMETRY PROBLEMS. | | | | | | | |
| CORRECTIVE ACTION-REPLACE MAIN MISSILE BATTERY. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AR141-0-3-11/PC-8CO-03-011 INVERTER | COMPOSITE-FACTORY 11F | 811124 | | YES NO | LELAND | 899075 |
| FAILURE MODE-OUT OF TOLERANCE. THE INVERTER WAS OPERATED FOR A PERIOD OF 35 MINUTES WITH A 6 MINUTE COOLING PERIOD AFTER 17 MINUTES OF OPERATION. REQUIREMENTS SPECIFY A 60 MINUTE COOLING PERIOD AFTER 30 MINUTES OF OPERATION. | | | | | | | |
| SYSTEM EFFECT-NONE. | | | | | | | |
| VEHICLE EFFECT-COMPOSITE DELAYED. A POST COMPOSITE SYSTEM TEST WAS REQUIRED TO SHOW SATISFACTORY OPERATION. | | | | | | | |
| CORRECTIVE ACTION-INVERTER REPLACED. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | A-9F-14-0827 INVERTER | PAR 27-08178-3 | 80E 811111 | WARREN | YES NO | LELAND AIRBORNE | |
| FAILURE MODE-OUT OF TOLERANCE. OUTPUT FREQUENCY EXCESSIVELY HIGH. THE REPORTED OUT OF TOLERANCE WAS UNCONFIRMED BY FAILURE ANALYSIS. | | | | | | | |
| CORRECTIVE ACTION-RELIABILITY PAR 9H-14-241 WAS GENERATED REQUESTING SYSTEMS ENGINEERING TO DESIGNATE A NEW INVERTER | | | | | | | |

GENERAL DYNAMICS
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DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRCRAFT

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DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO |
|--|---|---------------------------------|---------------------|------------------|----------------------|-------------------------------|
| ELECTRICAL-A/B POWER SOURCE | AE81-0993/PC-8CO-01-087 INVERTER | COMPOSITE-FACTORY 27-06177-3 | 27F 811028 | | NO NO | NO LELAND 899093 |
| <p>FAILURE MODE-OUT OF TOLERANCE. RECORDER MONITORING INVERTER VOLTAGE OUTPUT EXCEEDED THE UPPER LIMIT OF THE CALIBRATED INVERTER VOLTAGE AT POWER CHANGEOVER TO INTERNAL. THE MISSILE ELECTRICAL CHECKOUT SET WAS NOT PROPERLY NULLED.</p> <p>SYSTEM EFFECT-OPERATION TOO HIGH.</p> <p>VEHICLE EFFECT-COMPOSITE DELAYED. POST COMPOSITE TEST REQUIRED.</p> <p>CORRECTIVE ACTION-THE CHECKOUT SET WAS RECALIBRATED AND SATISFACTORY POST-COMPOSITE TEST WAS PERFORMED.</p> | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AE81-0794/L2-402-00-105 INVERTER, MISSILE ROTARY | FLIGHT | 1050 811021 | 1-2 90 | YES NO | BENDIX 892135 |
| <p>FAILURE MODE - OUT OF SPECIFICATION. PHASE A VOLTAGE REMAINED NEAR THE UPPER LIMIT OF THE SPECIFICATION BAND (119.3 TO 119.7 VAC) THROUGHOUT POWERED FLIGHT AND EXCEEDED THE SPECIFICATION DURING THE LATTER PORTIONS OF THE BOOSTER AND SUSTAINER PHASES.</p> <p>SYSTEM EFFECT-OPERATION TOO HIGH. THE VOLTAGE ROSE FROM 118.4 VAC AT BECO TO 118.8 VAC AT LIFTOFF TO 119.8 VAC AT BECO AND FROM 118.7 VAC AFTER BECO TO 117.0 VAC AT BECO. IT IS BELIEVED THAT THE HIGH LEVELS WERE DUE TO A HIGH NOMINAL VOLTAGE ADJUSTMENT OF THE MISSILE INVERTER.</p> <p>VEHICLE EFFECT-NONE.</p> <p>CORRECTIVE ACTION-UNKNOWN.</p> | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AE81-0278/PC-4CO-01-119 INVERTER | COMPOSITE-FACTORY | 119D 811020 | | NO NO | 899419 |
| <p>FAILURE MODE-OUT OF TOLERANCE THE EXTERNAL PHASE C VOLTAGE WAS 168 VOLTS. A VOLTAGE OF 163 PLUS OR MINUS 3 VOLTS IS EXPECTED.</p> <p>SYSTEM EFFECT-SYSTEM VOLTAGE TOO HIGH.</p> <p>VEHICLE EFFECT-COMPOSITE RESCHEDULED. THE COMPOSITE TEST HAD TO BE RERUN. AS A RESULT OF HIGH PHASE C VOLTAGE THE PULSE BEACON MAGNETRON CURRENT DROPPED BELOW ITS MINIMUM CALIBRATED LEVEL.</p> <p>CORRECTIVE ACTION-VOLTAGE RESET.</p> | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 2M-14-088F INVERTER | FAR 27-06178-3 | 811017 | 8 6 | SCHILLIN YES NO E | LELAND AIRBORNE |
| <p>FAILURE MODE-OUT OF TOLERANCE. INVERTER OUTPUT FREQUENCY FLUCTUATING. CORRECTIVE ACTION-RELIABILITY GENERATED BAR 9 M-14-641 REQUESTING SYSTEMS ENGINEERING TO DESIGNATE A NEW INVERTER FREQUENCY TEST POINT WHICH INCLUDES AN ELECTRICAL FILTER. THE REPORTED OUT OF TOLERANCE WAS UNCONFIRMED.</p> | | | | | | |

GENERAL DYNAMICS
CONVAIR DIVISION

18 JUN 1966

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF TIME | SITE DIF | PRI OTH | VENDOR NAME VENDOR PART NO |
|--|--|--------------------------------|--------------------------|-------------|------------|-------------------------------|
| | CORRECTIVE ACTION-RELIABILITY GENERATED RAR 9N-14-641 REQUESTING SYSTEMS ENGINEERING TO DESIGNATE A NEW INVERTER FOR EQUENCY TEST POINT WHICH INCLUDES AN ELECTRICAL FILTER. THE REPORTED OUT OF TOLERANCE WAS UNCONFIRMED. | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AE61-0991/PC-8CO-01-025 INVERTER | COMPOSITE-FACTORY | 25F 611002 | | NO NO | NO LELAND |
| FAILURE MODE-OUT OF TOLERANCE. AS A RESULT OF A BEAT FREQUENCY PICK-UP BETWEEN A GROUND POWER SUPPLY AND INTERNAL P OWER. OSCILLATIONS WERE OBSERVED ON CHANNEL D OF THE SANSORN RECORDER. THE BEAT FREQUENCY WAS CAUSED BY AN UNGROUNDE D AWE POWER SUPPLY. | | | | | | |
| SYSTEM EFFECT-NONE. | | | | | | |
| CORRECTIVE ACTION-THE AGE POWER SUPPLY WAS GROUNDED. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AE61-0798/PI-503-00-25 | FLIGHT | 25E 611002 | 11 313.2 | NO NO | NO AVCO |
| FAILURE MODE-OUT OF EXPECTED TEST VALUE. AT RE-ENTRY VEHICLE SEPARATION, PROGRAMMER SWITCH 17 OUTPUT MEASUREMENT (S 240X-RE-ENTRY VEHICLE SEPARATION) REFLECTED A LOAD ON THE MISSILE 28 VOLTS INTERMITTENTLY AFTER ACTIVATION FOR APPRO XIMATELY 6.5 SECONDS. THIS PROBLEM IS ATTRIBUTED TO A MIS-MATCH BETWEEN ATLAS AND AVCO BATTERIES. | | | | | | |
| SYSTEM EFFECT-NONE. THE FLIGHT PROGRAMMER IS PROTECTED FROM BURINOUT BY CURRENT LIMITERS, AND THE MISSILE BATTERY IS IMPERVIOUS TO LOADING OF THIS MAGNITUDE. | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | |
| CORRECTIVE ACTION-UNKNOWN, HOWEVER, AVCO PAPERWORK WAS INITIATED TO REMEDY THE CONDITION. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AD61-0297/DA601/01-3HO-05-24 INVERTER | COMPOSITE-FRD/DPL | 24E 610928 | F | YES NO | |
| FAILURE MODE-OUT OF TOLERANCE. INVERTER VOLTAGE AND FREQUENCY OUTPUTS OUT OF TOLERANCE. | | | | | | |
| SYSTEM EFFECT-OPERATION DOES NOT START. FAILURE TO TRANSFER TO INTERNAL. | | | | | | |
| VEHICLE EFFECT-COUNTDOWN ABORTED AND RESCHEDULED. | | | | | | |
| CORRECTIVE ACTION-INVERTER REPLACED. | | | | | | |

GENERAL MANICS
CONVAIR DIVISION

15 JUN 1966

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO |
|---|---|--------------------------------|---------------------|------------------|-------------|-------------------------------|
| ELECTRICAL-A/B POWER SOURCE | 98-14-075 INVERTER | FAR 27-08178-3 | 910721 | ETR | YES NO E | YES LELAND AIRBORNE NO E |
| FAILURE MODE-OUT OF TOLERANCE. THE INVERTERS OUTPUT VOLTAGE WAS OUT OF TOLERANCE. THE FAILURE WAS UNCONFIRMED. | | | | | | |
| CORRECTIVE ACTION-RECOMMEND THAT FIELD PERSONNEL CHECK ASSOCIATED EQUIPMENT PRIOR TO RELEASE TO FAILURE ANALYSIS. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 98-14-075 INVERTER | FAR 27-08178-3 | 2F 910718 | ETR | YES NO E | YES LELAND AIRBORNE NO E |
| FAILURE MODE-OUT OF TOLERANCE. OUTPUT VOLTAGE AND FREQUENCY FLUCTUATIONS. FAILURE NOT CONFIRMED BY FAILURE ANALYSIS | | | | | | |
| CORRECTIVE ACTION-MEMO TO FIELD TEST PERSONNEL TO MAKE CERTAIN OF FAILURE BY REPEAT TESTS OF SUSPECTED ITEMS PRIOR TO RELEASE FOR FAILURE ANALYSIS. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AE61-0549/FC-SCO-01-000 INVERTER | COMPOSITE-FACTORY | 9F 910713 | | YES NO | |
| FAILURE MODE-ERRATIC OPERATION. OSCILLATIONS OF THE INVERTER VOLTAGE, EXCEEDING THE 117 VAC LIMIT, WERE EVIDENCED AFTER POWER CHANGEOVER TO INTERNAL. CAUSED BY INSUFFICIENT WARM-UP OF INVERTER. | | | | | | |
| SYSTEM EFFECT-ERRATIC OPERATION. OSCILLATIONS OBSERVED ON 400 CPS POWER-CAUSED BY INSUFFICIENT WARMUP OF INVERTER. | | | | | | |
| VEHICLE EFFECT-COMPOSITE RESCHEDULED. POST-COMPOSITE TESTS REQUIRED TO SHOW PROPER OPERATION. | | | | | | |
| CORRECTIVE ACTION-THE TEST PROCEDURE WILL BE CHANGED TO ALLOW MORE WARM UP TIME FOR THE INVERTER. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AE61-0549/FC-SCO-02-037 INVERTER | COMPOSITE-FACTORY | 37E 910489 | | YES NO | YES LELAND |
| FAILURE MODE-OUT OF TOLERANCE. THE INVERTER VOLTAGE EXCEEDED THE MAXIMUM ALLOWABLE VOLTAGE. | | | | | | |
| SYSTEM EFFECT-INVERTER OUTPUT VOLTAGE TOO HIGH. | | | | | | |
| VEHICLE EFFECT-COMPOSITE DELAYED. POST-COMPOSITE TEST REQUIRED TO DEMONSTRATE PROPER OPERATION. | | | | | | |
| CORRECTIVE ACTION-THE INVERTER WAS RE-ADJUSTED AND TESTED SATISFACTORY. | | | | | | |

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GENERAL DYNAMICS
CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | DATE TIME DIP | PRI OTH | VE'DOR NAME VENDOR PART NO |
|---|---|--------------------------------|---------------------|------------------|------------|-------------------------------|
| ELECTRICAL-A/B POWER SOURCE | AE61-0013/FC-4CO-11-088 INVERTER | COMPOSITE-FACTORY | 88D 610620 | 80 | YES NO | 999620 |
| FAILURE MODE-OUT OF TOLERANCE. THE INVERTER FREQUENCY EXCEEDED LOWER CALIBRATED LIMIT PRIOR TO POWER CHANGEOVER TO INTERNAL. CONDITION ATTRIBUTED TO INSUFFICIENT WARM-UP TIME OF THE INVERTER. | | | | | | |
| SYSTEM EFFECT-OPERATION TOO LOW. | | | | | | |
| VEHICLE EFFECT-COMPOSITE RESCHEDULED. POST-COMPOSITE TESTING REQUIRED. | | | | | | |
| CORRECTIVE ACTION-COMPOSITE PROCEDURE CHANGED TO PROVIDE FOR POWER CHANGEOVER AT 90 SECONDS INSTEAD OF AT 60 SECONDS AFTER THE INVERTER IS TURNED ON. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AE61-0013/FC-4CO-010-088 INVERTER | COMPOSITE-FACTORY | 88D 610620 | | YES NO | 999622 |
| FAILURE MODE-DRIFT. PRIOR TO POWER CHANGEOVER TO INTERNAL, INVERTER FREQUENCY WAS BELOW THE MINIMUM ALLOWED. | | | | | | |
| SYSTEM EFFECT-OPERATION TOO LOW. | | | | | | |
| VEHICLE EFFECT-COMPOSITE RESCHEDULED. SYSTEMS LEVEL AND COMPOSITE RETESTS REQUIRED. | | | | | | |
| CORRECTIVE ACTION-REPLACED INVERTER. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 9F-14-074 INVERTER | FAR 27-08176-3 | 42E 610620 | FAIRCHILD D | YES NO | LELAND AIRBORN E |
| FAILURE MODE-OUT OF TOLERANCE. OUT OF TOLERANCE OUTPUT FREQUENCY. THE FAILURE WAS UNCONFIRMED. | | | | | | |
| CORRECTIVE ACTION-MEMO TO FIELD TEST PERSONNEL TO MAKE CERTAIN OF FAILURE BY REPEAT TESTS OF SUSPECTED ITEMS PRIOR TO RELEASE FOR FAILURE ANALYSIS. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 90-14-070 INVERTER | FAR 27-08349-801 | 910606 | WTR | NO NO | LELAND AIRBORN E |
| FAILURE MODE-ERRATIC OPERATION CAUSED BY THE OPEN CIRCUITING AT INVERTER START-UP OF A GROUND SUPPLY CIRCUIT BREAKER. | | | | | | |
| CORRECTIVE ACTION-A (SABE) RELEASED E.O. DIRECTING THE (JUMPING) OF THE CIRCUIT BREAKER OPENING UNDER INVERTER START-UP. | | | | | | |
| | | | | | | PAGE 0000 |

GENERAL DYNAMICS
CONVAIR DIVISION

15 JUN 1966

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM | TEST/REPORT NUMBER | TEST/REPORT NUMBER | VEHICLE | DATE | TIME | DI | PT | OTH | VENDOR NAME | PRI | OTH | PRI | VENDOR NAME |
|---|--|--------------------|---------|------|------|----------------|--------|-----|-------------|-----|-----|-----|-------------|
| SUB-SYSTEM | FAILED COMPONENT NAME | DATA SOURCE | DATE | TIME | DI | PT | OTH | PRI | VENDOR NAME | PRI | OTH | PRI | VENDOR NAME |
| ELECTRICAL-A/B | 90-14-068 INVERTER DIODE | FAR | 610330 | WTR | NO | LELAND AIRBORN | 894367 | | | | | | |
| POWER SOURCE | | 27-08178-3 | | | | | | | | | | | |
| FAILURE MODE-ELECTRICAL SHORT, HIGH EXTERNAL LOADING RESULTING IN SHORT CIRCUITING OF A DIODE. | | | | | | | | | | | | | |
| CORRECTIVE ACTION-NONE, SINCE THE CAUSE OF THE FAILURE IS FROM AN EXCESSIVE OVERLOAD IMPOSED ON THE INVERTER. | | | | | | | | | | | | | |
| ELECTRICAL-A/B | 90-14-067 INVERTER DIODE | FAR | 27E | WTR | NO | BENDIX | 894370 | | | | | | |
| POWER SOURCE | | 27-08178-1 | 610330 | | | | | | | | | | |
| FAILURE MODE-ELECTRICAL SHORT, HIGH EXTERNAL LOADING RESULTING IN SHORT CIRCUITING OF A DIODE. | | | | | | | | | | | | | |
| CORRECTIVE ACTION-NONE SINCE THE CAUSE OF THE FAILURE IS FROM AN EXCESSIVE OVERLOAD IMPOSED ON THE INVERTER. | | | | | | | | | | | | | |
| ELECTRICAL-A/B | 90-14-066 MAIN MISSILE INVERTER DIODE | FAR | 610529 | WTR | NO | LELAND AIRBORN | 894369 | | | | | | |
| POWER SOURCE | | 27-08178-3 | | | | | | | | | | | |
| FAILURE MODE-ELECTRICAL SHORT, HIGH EXTERNAL LOADING RESULTING IN SHORT CIRCUITING OF A DIODE. | | | | | | | | | | | | | |
| CORRECTIVE ACTION-NONE SINCE THE CAUSE OF THE FAILURE IS FROM AN EXCESSIVE OVERLOAD IMPOSED ON THE INVERTER. | | | | | | | | | | | | | |
| ELECTRICAL-A/B | 90-14-066 INVERTER DIODE | FAR | 610523 | WTR | NO | LELAND AIRBORN | 894368 | | | | | | |
| POWER SOURCE | | 27-08178-3 | | | | | | | | | | | |
| FAILURE MODE-ELECTRICAL SHORT, CAUSED BY HIGH EXTERNAL LOADING RESULTING IN SHORT CIRCUITING OF A DIODE. | | | | | | | | | | | | | |
| CORRECTIVE ACTION-NONE SINCE THE CAUSE OF THE FAILURE IS FROM AN EXCESSIVE OVERLOAD IMPOSED ON THE INVERTER. | | | | | | | | | | | | | |
| ELECTRICAL-A/B | AES1-0188/FC-4CO-08-119 SIMULATOR, INVERTER | COMPOSITE-FACTORY | 1150 | | NO | | | | | | | | |
| POWER SOURCE | | 610581 | | | NO | | | | | | | | |
| FAILURE MODE-ERRATIC OPERATION. FAULTY 60 CPS GROUND POWER REGULATION. | | | | | | | | | | | | | |
| SYSTEM EFFECT-NONE. | | | | | | | | | | | | | |
| VEHICLE EFFECT-COMPOSITE RESCHEDULED. COMPOSITE REARM REQUIRED. FAULTY 60 CPS POWER REGULATION EFFECTED 6ND GUL | | | | | | | | | | | | | |
| DANCE TEST EQUIPMENT WHICH IN TURN CAUSED A/B GUIDANCE PULSE BEACON OUTPUT TO BE ERRATIC. | | | | | | | | | | | | | |

GENERAL AMICS
CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | SITE TIME DIP | PRI DIP | VENDOR NAME VENDOR PART NO |
|--|--|--------------------------------|---------------------|------------------|------------|-------------------------------|
| CORRECTIVE ACTION-NOT KNOWN. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AE61-0404/FC-500-01-030 INVERTER | COMPOSITE-FACTORY | 3DE 610318 | FACTORY | YES NO | |
| FAILURE MODE-OUT OF SPECIFICATION ON TOLERANCE-THE INVERTER OUTPUT VOLTAGE WAS TOO HIGH. | | | | | | |
| SYSTEM EFFECT-OPERATION TOO HIGH. | | | | | | |
| VEHICLE EFFECT-COMPOSITE RESCHEDULED. COMPOSITE WAS RUN AND A SECOND SYSTEM RETEST WAS REQUIRED. | | | | | | |
| CORRECTIVE ACTION-THE INVERTER WAS READJUSTED. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AE61-0245/P4-401-00-100 BATTERY | COUNTDOWN | 100D 610425 | 14 -75 | YES NO | |
| FAILURE MODE-OUT OF SPECIFICATION. MISSILE SYSTEM DC VOLTAGE DROPPED FROM 28.0 VDC TO REDLINE CONDITION OF 26.0 VDC . DROP APPARENTLY DUE TO LOADS AT ENGINE START. | | | | | | |
| SYSTEM EFFECT-OPERATION TOO LOW. MISSILE DC VOLTAGE AT REDLINE CONDITION. | | | | | | |
| VEHICLE EFFECT-COUNTDOWN DELAYED. AN EIGHT MINUTE HOLD WAS CALLED WHILE POWER WAS SWITCHED TO EXTERNAL TO ALLOW REC OVERY. POWER SWITCHED BACK TO INTERNAL AT 1-00 SECONDS. POWER STABLE FOR DURATION OF FLIGHT. | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 6P-14 053 BATTERY | FAR 27-08359-3 | 95D 610403 | WTR | YES NO | YARNEY ELECT |
| FAILURE MODE-OUT OF TOLERANCE. VOLTAGE WAS REPORTED TOO LOW FOR SERVICE. FAILURE ANALYSIS AT 60/C DID NOT CONFIRM T HE REPORTED FAILURE. | | | | | | |
| CORRECTIVE ACTION-NONE. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AE60-0937/P3-502-00-13 MAIN MISSILE BATTERY | FLIGHT | 19E 610313 | 13 177 | YES NO | |
| FAILURE MODE-FAIL DURING OPERATION. THE MISSILE BATTERY VOLTAGE BEGAN TO DECREASE GRADUALLY FROM THE 28.0 VOLT OPER ATING LEVEL AT 177 SECONDS, DROPPING BELOW THE 26 VOLT LOWER LIMIT BY 300 SECONDS, POSSIBLY DUE TO A FAULTY CELL WIT HIN THE BATTERY. DURING COUNTDOWN EXCESSIVE VOLTAGES WERE OBSERVED BUT WERE NOT CONSIDERED SIGNIFICANT ENOUGH TO ABO RT THE LAUNCH. | | | | | | |
| SYSTEM EFFECT-OPERATION TOO LOW. BATTERY VOLTAGE DECAYED BELOW THE NOMINAL LOWER LIMIT BUT DID NOT EFFECT FLIGHT PE | | | | | | |

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GENERAL MANICS
CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-REINBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP TIME DIP | PR: OTH | VENDOR NAME VENDOR PART NO | |
|--|--|--------------------------------|------------------------------|------------|-------------------------------|--------|
| PERFORMANCE OF OTHER SYSTEMS THROUGH RETRO-ROCKET FIRING AND LOSS OF TELEMETRY AT 664 SECONDS. | | | | | | 096120 |
| VEHICLE EFFECT-NONE. | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AE60-0937/P3-302-00-13 INVERTER | FLIGHT | 13E 13 610313 544 | YES NO | | 096126 |
| FAILURE MODE-OUT OF TOLERANCE. INVERTER FREQUENCY BEGAN RAPID DECAY, GOING OUT OF BAND AT 337 SECONDS. | | | | | | |
| SYSTEM EFFECT-ERRATIC OPERATION-INVERTOR VOLTAGES RESONATED TO FREQUENCY DECAY BY DECREASING TO OUT OF BAND (PHASES A AND C) AND BY DECREASING (PHASE B) TO 110 VOLTS WHEN IT REVERSED TO GO OUT OF BAND HIGH. | | | | | | |
| VEHICLE EFFECT-NONE. MALFUNCTION OCCURRED 114.8 SECONDS AFTER PLANNED RETRO-ROCKET FIRING. | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 90-14-049 INVERTER DIODE | FAR 7-06349-1 | 780 610303 | YES NO | | 096763 |
| FAILURE MODE-ELECTRICAL SHORT. LOW OUTPUT VOLTAGE CAUSED BY SHORT CIRCUITED DIODE CR-10. | | | | | | |
| CORRECTIVE ACTION-THE BENDIX DIODE WAS REMOVED AS AN APPROVED PART. FUTURE DIODE USAGE IS TO BE TRANSITRON. CLOSE & D/C SURVEILLANCE OF EXISTING INVERTERS FOR DIODE FAILURE. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AD61-0085/DA378/01-SHO-01-07 BATTERY/HEATER | COMPOSITE-FRD/DPL | 7E 610303 | YES NO | | 096433 |
| FAILURE MODE-ELECTRICAL OPEN. BATTERY HEATER CIRCUIT WAS NOT CONNECTED FOR THIS TEST RESULTING IN A MISSILE BATTERY ACTIVATED AMBER INDICATION BECAUSE OF LOW VOLTAGE DURING THE COMMIT SEQUENCE. | | | | | | |
| SYSTEM EFFECT-OPERATION TOO LOW. | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AA61-0021/P3-301-00-08 MAIN MISSILE BATTERY | COUNTDOWN | 9E 13 610224 -3000 | YES NO | | |
| FAILURE MODE-OUT OF SPECIFICATION. UNLOADED MAIN MISSILE BATTERY VOLTAGE DROPPED BELOW REDLINE; LEVEL OF 38.5 VOLTS. CAUSE UNKNOWN. | | | | | | |

15 JUN 1988

GENERAL HANICS
CONVAH DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|--|--|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| SYSTEM EFFECT-OPERATION TOO LOW. | | | | | | | 000015 |
| VEHICLE EFFECT-COUNTDOWN DELAYED. HOLD CALLED TO REPLACE BATTERY. TOTAL HOLD TIME WAS 45 MINUTES. | | | | | | | |
| CORRECTIVE ACTION-REPLACE BATTERY. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | A081-0021/P3-S01-00-00 MAIN MISSILE BATTERY | COUNTDOWN | 9E 610224 | 13 -210 | YES NO | | 000015 |
| FAILURE MODE-ERRATIC OPERATION. MAIN MISSILE BATTERY VOLTAGE FLUCTUATING. CAUSE UNKNOWN. | | | | | | | |
| SYSTEM EFFECT-ERRATIC OPERATION. | | | | | | | |
| VEHICLE EFFECT-COUNTDOWN DELAYED. COUNTDOWN RECYCLED, DURING HOLD FOR TELEMETRY PROBLEM AND TO REPLACE MAIN MISSILE BATTERY FOR SECOND TIME. BATTERY HAD BEEN PREVIOUSLY REPLACED DURING EARLIER HOLD. | | | | | | | |
| CORRECTIVE ACTION-REPLACE BATTERY. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AE-61-0093/FC-SC0-01-033 INVERTER | COMPOSITE-FACTORY 33E | 610218 | | YES NO | YES LELAND | 000300 |
| FAILURE MODE-ERRATIC OPERATION-A BEAT FREQUENCY PICKUP BETWEEN THE AC AND PWR SUPPLY AND INVERTED AC PWR SUPPLY CAU SED OSCILLATIONS ON THE ELECTRICAL AND FLIGHT CONTROL SYSTEMS. | | | | | | | |
| SYSTEM EFFECT-ERRATIC OPERATION. OSCILLATIONS CAUSED BY BEAT BETWEEN GROUND AND AIRBORNE PWR SUPPLIES. | | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | | |
| CORRECTIVE ACTION-WORK IS IN PROGRESS TO ALLEVIATE THIS PROBLEM ON ALL E SERIES DOCKS. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 98-14-064 BATTERY | FAR 27-00398-3 | 610213 | ETR | YES NO | YES YARDNEY ELECT | 004901 |
| FAILURE MODE-LEAK OF BATTERY GAS PRESSURE TO 50 PSI (MINIMUM OPERABLE PRESSURE IS 240 PSI) PROHIBITED THE USE OF TH E BATTERY IN MISSILE SERVICE. | | | | | | | |
| CORRECTIVE ACTION-YARDNEY (E) SERIES MAIN MISSILE BATTERIES WILL NOT BE USED AS FLIGHT ITEMS UNTIL REQUALIFIED FOR FLIGHT WHICH INCLUDES THE RESOLVING OF PRESENT DESIGN PROBLEMS. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | A081-0008/FC-SC0-01-022 INVERTER | COMPOSITE-FACTORY 22E | 610210 | FACTORY | YES NO | YES LELAND | |
| FAILURE MODE-OUT OF TOLERANCE-AC VOLTAGE INDICATED 118.0 TO 119.3VAC DURING THE TEST. A MINIMUM OF 112.0VAC IS ALSO REQD. | | | | | | | |

GENERAL JANICS
CONVAIR DIVISION

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DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | SITE TIME DIP | PRI OTH | VENDOR NAME VENDOR PART NO | |
|--------------------------------|--|---------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| | SYSTEM EFFECT-OPERATION TOO LOW. VEHICLE EFFECT-COMPOSITE RESCHEDULED. CORRECTIVE ACTION-THE INVERTER WAS READJUSTED. | | | | | | 996319 |
| ELECTRICAL-A/B POWER SOURCE | AE61-0092/FC-9CO-02-031 INVERTER | COMPOSITE-FACTORY 31E 910208 | | | NO NO | NO LELAND | 999391 |
| | FAILURE MODE-ERRATIC OPERATION-INVERTER AC VOLTAGE DISPLAYED FLUCTUATIONS OF UP TO 0.4VAC THROUGH OUT TEST. SYSTEM EFFECT-ERRATIC OPERATION-INVERTER OUTPUT VOLTAGE FLUCTUATED. INVERTER REPLACED BUT LATER WAS FOUND O.K. TROUBLE APPARENTLY CAUSED BY PICKUP IN MONITORING CIRCUIT. VEHICLE EFFECT-COMPOSITE RESCHEDULED-COMPOSITE RE-RAN. CORRECTIVE ACTION-THE INVERTER WAS REPLACED. REMARK DOCK GROUNDING SYSTEM. | | | | | | 999483 |
| ELECTRICAL-A/B POWER SOURCE | AE61-0092/FC-9CO-01-031 INVERTER | COMPOSITE-FACTORY 31E 910203 | | | YES NO | YES 002-0072 | 999483 |
| | FAILURE MODE-OUT OF TOLERANCE. THE INVERTER OUTPUT FREQUENCY WAS TOO LOW. SYSTEM EFFECT-INVERTER OUTPUT FREQUENCY WAS TOO LOW. VEHICLE EFFECT-COMPOSITE RESCHEDULED. COMPOSITE RE-RUN REQUIRED. CORRECTIVE ACTION-INVERTER REMOVED AND FREQUENCY RE-ADJUSTED. | | | | | | 994893 |
| ELECTRICAL-A/B POWER SOURCE | 98-14-081 MAIN MISSILE BATTERY | FAR 27-06180-1 | 9E 910123 | ETR | YES NO | YES YARDNEY | 994893 |
| | FAILURE MODE-DRIFT IN BATTERY VOLTAGE CAUSED BATTERY REMOVAL. FAILURE ANALYSIS DID NOT CONFIRM FAILURE. IT WAS HYPOTHESIZED THAT THE BATTERY WOULD PROBABLY HAVE PERFORMED SATISFACTORILY. CORRECTIVE ACTION-UNKNOWN. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 98-14-080 BATTERY | FAR 27-06180-1 | 9E 910119 | ETR | YES NO | YES YARDNEY ELECT. | |
| | FAILURE MODE-ERRATIC OPERATION CAUSE BY LEAKING ELECTROLYTE. | | | | | | |

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CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTM | VENDOR NAME VENDOR PART NO |
|--|---|--------------------------------|---------------------|------------------|------------|-------------------------------|
| CORRECTIVE ACTION-RETURN STOCK BATTERIES TO VENDOR FOR INVESTIGATION OF METHOD TO PREVENT INTERNAL ELECTROLYTE LEAK AGE. QUALIFICATION OF SECOND SOURCE VENDOR HAS BEEN COMPLETED. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AE81-0053/FC-SCO-03-017 INVERTER | COMPOSITE-FACTORY | 17E 610112 | FACTORY | YES NO | |
| FAILURE MODE-OUT OF TOLERANCE. PHASE A INVERTER VOLTAGE EXCEEDED 117 VAC AT POWER CHANGEOVER TO INTERNAL AND DROPPED TO 115.6 VAC AT TEST START. POOR REGULATION OF THE INVERTER WAS SUSPECTED. SYSTEM EFFECT-OPERATION TOO HIGH. VEHICLE EFFECT-COMPOSITE RE-SCHEDULED. POST-COMPOSITE TESTING AND SYSTEMS LEVEL RETESTING REQUIRED. CORRECTIVE ACTION-REPLACED THE INVERTER. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AE81-0053/FC-SCO-02-017 INVERTER | COMPOSITE-FACTORY | 17E 610110 | FACTORY | YES NO | |
| FAILURE MODE-OUT OF TOLERANCE. DATA FROM MIDWESTERN RECORDER NO. 2 INDICATED THAT THE INVERTER PHASE A VOLTAGE EXCEEDED 117 VAC WITH NO LOAD APPLIED AND REMAINED ABOVE THE UPPER LIMIT WHEN LOAD WAS APPLIED. PROBLEM WAS ATTRIBUTED TO IMPROPER INVERTER ADJUSTMENT. SYSTEM EFFECT-OPERATION TOO HIGH. VEHICLE EFFECT-COMPOSITE RE-SCHEDULED. POST-COMPOSITE TESTING REQUIRED. CORRECTIVE ACTION-REPLACED INVERTER. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AE81-0053/FC-SCO-02-017 INVERTER | COMPOSITE-FACTORY | 17E 610110 | FACTORY | YES NO | |
| FAILURE MODE - OUT OF SPECIFICATION. INVERTER OUTPUT FREQUENCY WAS 397 CPS CAUSING PROGRAMMER DISCREPANCIES. INTEGRATOR MULLING AND VERNIER REACTIVATION AT SUSTAINER CUTOFF WAS NOT EVIDENT DUE TO NON-SYNCHRONIZATION OF THE TEST PROGRAMMER AND GUIDANCE TEST PROGRAM. THE TEST PROGRAMMER DID NOT APPLY CYRO BIAS TO THE INTEGRATORS FOR THE EXPECTED 10 SECONDS BEFORE SUSTAINER CUTOFF. THE INTEGRATORS HAD VOLTAGE APPLIED AFTER THE ISSUANCE OF SUSTAINER CUTOFF COMMAND. SYSTEM EFFECT-IMPROPER ANALOG SIGNALS. VEHICLE EFFECT-COMPOSITE RESCHEDULED. POST-COMPOSITE TESTING REQUIRED. CORRECTIVE ACTION - THE INVERTER WAS REPLACED AFTER THE FOURTH COMPOSITE. | | | | | | |

GENERAL DYNAMICS
CONVAIR DIVISION

15 JUN 1956

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO |
|--|---|---------------------------------|---------------------|------------------|--------------------------|-------------------------------|
| ELECTRICAL-A/B POWER SOURCE | AE60-1013/PC-5CO-DE-016 INVERTER | COMPOSITE-FACTORY 19E 801250 | YES NO | | | |
| <p>FAILURE MODE-ERRATIC OPERATION- OSCILLATIONS OF 0.8 VAC WERE EVIDENT ON PHASE A OF THE INVERTER OUTPUT.</p> <p>SYSTEM EFFECT-ERRATIC OPERATION.</p> <p>VEHICLE EFFECT-COMPOSITE RE-SCHEDULED. SYSTEM AND COMPOSITE RETESTING WAS REQUIRED.</p> <p>CORRECTIVE ACTION-THE PROBLEM COULD NOT BE DUPLICATED, HOWEVER THE INVERTER WAS REPLACED AS A PRECAUTIONARY MEASURE.</p> | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AE61-0015/PC-4CO-01-086 INVERTER | COMPOSITE-FACTORY 80D 801216 | YES NO | | | |
| <p>FAILURE MODE-DRIFT. A 1.8 VAC INCREASE IN VOLTAGE OCCURRED DURING THE TIME POWER WAS SUPPLIED BY THE INVERTER. AN I INCREASE OF 0.8 VAC OCCURRED AFTER EACH CHANGEOVER.</p> <p>SYSTEM EFFECT-ERRATIC OPERATION.</p> <p>VEHICLE EFFECT-COMPOSITE RESCHEDULED. SYSTEMS LEVEL AND COMPOSITE RETESTING REQUIRED.</p> <p>CORRECTIVE ACTION-REPLACED INVERTER.</p> | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 9B-14-070 BATTERY | FAR 27-06160-1 | SE 801110 | ETR NO | YES YARDNEY ELECT. NO | |
| <p>FAILURE MODE-OUT OF SPECIFICATION. BATTERY OUTPUT VOLTAGE WAS CAUSED BY ELECTROLYTE LEAKAGE AND RESULTANT IMPROPER CURRENT PATHS.</p> <p>CORRECTIVE ACTION-A STOP ORDER WAS PLACED ON THE VENDOR PENDING COMPLETE EVALUATION OF A SECOND SOURCE VENDOR.</p> | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AE60-0867/PC-4CO-01-096 BATTERY | COMPOSITE-FACTORY 98D 801103 | NO NO | 210 NO | | |
| <p>FAILURE MODE-FAIL DURING OPERATION- AT APPROX. 210 SECONDS, LOADING OF THE CHANNELS MONITORING, THE FOLLOWING FUNCT IONS WAS EVIDENT ON MW 1 AND MW 26 GUIDANCE PULSE AND RATE BEACON POWER- ELECTRICAL FUNCTIONS AND FLIGHT CONTROL FUN CTIONS. MAIN MISSILE CURRENT ALSO INCREASED FROM 88 TO 90 AMP8.</p> <p>SYSTEM EFFECT-IMPROPER ANALOG SIGNALS</p> <p>VEHICLE EFFECT-COMPOSITE RESCHEDULED. PARTIAL COMPOSITE RETEST WAS PERFORMED.</p> <p>CORRECTIVE ACTION-THE PROBLEM WAS CAUSED BY GROUNDING OF THE MISSILE 28VDC POWER SUPPLY THRU K795 (RELAY) IN THE A/</p> | | | | | | |

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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | SITE TIME DIP | PRI OTH | VENDOR NAME VENDOR PART NO | |
|--|--|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| | P CHECKOUT SET WHEN THE PRESSURIZE VERNIER TANKS SWITCH K32 (ERB) IS ENERGIZED. THE CHECKOUT TEST SET (AGE) WAS REMOVED TO EOB OF B/P 27-41065 (REF CIC 71010) | | | | | | 000023 |
| ELECTRICAL-A/B POWER SOURCE | AE60-0871/PC-SC0-02-011 INVERTER | COMPOSITE-FACTORY | 11E 601031 | NC NO | | | 000039 |
| FAILURE MODE-OPEN (ELECT). CHANNEL 33 OF MIDWESTERN RECORDING NO. 2, INVERTER AC VOLTAGE, INDICATED AN OPEN CIRCUIT CONDITION THROUGHOUT THE TEST BECAUSE OF AN OPEN WIRE IN THE FREQUENCY AND VOLTAGE MONITOR PANEL OF THE ELECTRICAL CHECKOUT SET. | | | | | | | |
| SYSTEM EFFECT-NONE. | | | | | | | |
| VEHICLE EFFECT-COMPOSITE RE-SCHEDULED. POST-COMPOSITE TESTING REQUIRED. | | | | | | | |
| CORRECTIVE ACTION-REPAIRED OPEN WIRE IN AGE ELECTRICAL CABINET. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 98-14-039 BATTERY | FAR 27-06359-3 | 55D 601021 | ETR | YES NO | YARDNEY ELECT. | 004092 |
| FAILURE MODE-FAILURE TO OPERATE AT PRESCRIBED TIME ON COMMAND SIGNAL. INSUFFICIENT SQUIBB POWER IS ATTRIBUTED AS THE CAUSE. | | | | | | | |
| CORRECTIVE ACTION-BATTERY ACTIVATION COMMAND OCCURRED AT 1-15 MINUTES. COMMAND FOR ACTIVATION AT 1-30 MINUTES WAS REQUESTED. THE VENDOR NOW FLOUROSCOPES ALL BATTERY SQUIBBS TO DETERMINE IF THE PYROTECHNIC CHARGE IS ADEQUATE. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AE60-0730/PC-SC0-02-009 SIMULATOR, INVERTER | COMPOSITE-FACTORY | 9E 601017 | YES NO | | | 000472 |
| FAILURE MODE-ERRATIC OPERATION- HARMONIC BEAT INTRODUCED INTO GUIDANCE EQUIPMENT BY GROUND POWER (AC) BEATING WITH A/B INVERTER SUPPLY. | | | | | | | |
| SYSTEM EFFECT-NONE. HARMONIC BEAT CAUSED FLUCTUATION OF GUIDANCE SIGNALS. | | | | | | | |
| VEHICLE EFFECT-COMPOSITE RESCHEDULED. POST COMPOSITE TESTING REQUIRED TO ISOLATE TROUBLE. | | | | | | | |
| CORRECTIVE ACTION-NOT KNOWN. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AA60-0108/P3-303-00-03 BATTERY-MAIN MISSILE | COUNTDOWN | 3E 601011 | 13 NO | YES NO | | |
| FAILURE MODE-OUT OF TOLERANCE. AT 1-70 MINUTES THE MAIN MISSILE BATTERY OPEN CIRCUIT VOLTAGE HAD DECREASED TO 38.4 VDC WHICH WAS BELOW REDLINE. | | | | | | | |
| SYSTEM EFFECT-OPERATION TOO LOW. THE MAIN MISSILE BATTERY WAS OPERATING BELOW THE OPEN CIRCUIT REDLINE VALUE (38.9V) | | | | | | | |

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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO |
|---|---|--------------------------------|---------------------|------------------|------------|-------------------------------|
| DC). | VEHICLE EFFECT-COUNTDOWN DELAYED. A HOLD WAS CALLED TO COMPLETE COUNTDOWN CHECKS AND EXTENDED TO CHANGE THE MAIN MISSILE BATTERY. CORRECTIVE ACTION-THE MAIN MISSILE BATTERY WAS REPLACED. | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AASD-0108/PS-501-00-03 BATTERY, RANGE SAFETY | PRP | 3E 600923 | 15 | YES NO | |
| FAILURE MODE-OUT OF SPECIFICATION. DUE TO A LOW BATTERY OUTPUT THE COMMAND NO.1, 1 1/2 AMP DESTRUCT FUSE WAS NOT BLOWN ON COMMAND. SYSTEM EFFECT-OPERATION DOES NOT START. VEHICLE EFFECT-NONE. CORRECTIVE ACTION-UNKNOWN. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AASD-0108/PS-501-00-03 RANGE SAFETY BATTERY | PRP | 3E 600923 | 15 | YES NO | |
| FAILURE MODE-OUT OF SPECIFICATION. DURING PRP, THE COMMAND NO. 1 1.5 AMP FUSE FAILED TO BLOW IN THE DESTRUCTOR UNIT DUE TO A LOW BATTERY VOLTAGE. SYSTEM EFFECT-OPERATION TOO LOW. BATTERY VOLTAGE WAS TOO LOW TO BLOW TEST FUSE IN DESTRUCTOR UNIT. VEHICLE EFFECT-NONE. CORRECTIVE ACTION-REPLACE BATTERY. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AESD-0645/PC-400-01-07 INVERTER | COMPOSITE-FACTORY | 97D 600811 | | YES NO | |
| FAILURE MODE-DRIFT. A 115 VAC LEVEL CHANGE OF 0.6 V WAS INDICATED ON CHANNEL 39 OF MIDWESTERN RECORDER NO 8 DURING HIGH CALIBRATION. APPARENTLY CAUSED BY A FLUCTUATION OF 115 VAC EXTERNAL POWER SUPPLY. SYSTEM EFFECT-OPERATION TOO HIGH. VEHICLE EFFECT-COMPOSITE RESCHEDULED. CORRECTIVE ACTION-NONE- EXACT CAUSE COULD NOT BE DETERMINED. | | | | | | |

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| SYSTEM | TEST/REPORT NUMBER | DIP DATA SOURCE | VEHICLE DATE | VEHICLE TIME | VEHICLE DIF | PRI | OTH | VENDOR NAME | VENDOR PART NO |
|--|------------------------------------|-------------------|--------------|--------------|-------------|-----|--------|-------------|----------------|
| 900-SYSTEM | | | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AE80-0488/FC-4CO-01-32 INVERTER | COMPOSITE-FACTORY | 320 | 600611 | | YES | NO | | |
| <p>FAILURE MODE-OUT OF TOLERANCE. THE INVERTER AC VOLTAGE EXCEEDED THE 117 VAC CALIBRATED LEVEL THROUGHOUT THE TEST IN MONITORED ON CHANNEL 35 OF MIDWESTERN RECORDER NO. 2.</p> <p>SYSTEM EFFECT-OPERATION TOO HIGH.</p> <p>VEHICLE EFFECT-COMPOSITE RESCHEDULED. POST COMPOSITE TESTING REQUIRED.</p> <p>CORRECTIVE ACTION-THE AC VOLTAGE WAS READJUSTED TO OBTAIN THE PROPER LEVEL.</p> | | | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AE60-0497/FC-4CO-01-76 INVERTER | COMPOSITE-FACTORY | 760 | 600809 | 140 | YES | NO | | |
| <p>FAILURE MODE-DRIFT. PEAK VARIATIONS OF CHANNEL 35 OF MIDWESTERN RECORDER NO. 2, 113 VAC INTERNAL, EXCEEDED THE MAXIMUM CALIBRATED LEVEL FROM ABOUT 140 SECONDS TO END OF TEST. THE VARIATIONS WERE CAUSED BY A BEAT FREQUENCY BETWEEN THE GROUND AND THE AIRBORNE POWER SUPPLIES BEING PICKED UP IN THE MONITORING LOOP.</p> <p>SYSTEM EFFECT-OPERATION TOO HIGH.</p> <p>VEHICLE EFFECT-COMPOSITE RESCHEDULED. POST-COMPOSITE TESTING REQUIRED.</p> <p>CORRECTIVE ACTION-THE INVERTER AND THE INLET POWER SUPPLY WERE READJUSTED TO NOMINAL LEVELS.</p> | | | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 99-14-048 MAIN MISSILE INVERTER | FAR | 600302 | 7-08349-3 | FACTORY | YES | BENDIX | | |
| <p>FAILURE MODE-ERRATIC OPERATION. INVERTER OUTPUT FREQUENCY FLUCTUATED, ALTHOUGH OPERATION WAS WITHIN SPECIFICATION.</p> <p>CORRECTIVE ACTION-FAILURE NOT CONFIRMED. CONTINUE TO INSPECT INVERTERS AND REJECT IF OPERATION IS ERRATIC, ALTHOUGH WITHIN SPECIFICATION.</p> | | | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | DAL86/B2-4MO-30-23 INVERTER | COMPOSITE-FRD/DPL | 230 | 600421 | 8-2 | YES | NO | | |
| <p>FAILURE: MODE-OUT OF TOLERANCE ON INVERTER FREQUENCY.</p> <p>SYSTEM EFFECT-OPERATION DOES NOT START-VEHICLE DID NOT TRANSFER TO INTERNAL POWER.</p> <p>VEHICLE EFFECT-COMMIT SEQUENCE AND COUNTDOWN ABORTED.</p> <p>CORRECTIVE ACTION-INVERTER REPLACED.</p> | | | | | | | | | |

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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|--|---|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| ELECTRICAL-A/B POWER SOURCE | 98-14-043 MAIN MISSILE INVERTER | FAR 7-08349-3 | 48D 600329 | FACTORY | YES | BENDIX | 898779 |
| FAILURE MODE-OUT OF TOLERANCE VOLTAGE FLUCTUATIONS OCCURRED IN THE INVERTERS OUTPUT. | | | | | | | |
| CORRECTIVE ACTION-50/C SURVEY OF ALL SUBJECT PART NUMBERS AND INSPECTION FOR AND THE REMOVAL OF THE CONSTRUCTION ANOMALY. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AE80-032R/FC-4CO-02-64 INVERTER | COMPOSITE-FACTORY | 64D 600322 | 277 | YES | NO | 897600 |
| FAILURE MODE-OUT OF TOLERANCE. OUTPUT VOLTAGE EXCEEDED 117VAC FOR A SHORT DURATION AT 277 SECONDS. DURING THE REMAINDER OF THE TEST THE VOLTAGE RETURNED TO A VALUE LESS THAN 117 VAC. | | | | | | | |
| SYSTEM EFFECT-OPERATION TOO HIGH. | | | | | | | |
| VEHICLE EFFECT-COMPOSITE RESCHEDULED. | | | | | | | |
| CORRECTIVE ACTION-INVERTER WAS READJUSTED. COMPOSITE RE-RUN. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 98-14-043 MAIN MISSILE BATTERY | FAR 27-08359-5 | 48D 600310 | FACTORY | YES | YARDNEY ELECT. | 898804 |
| FAILURE MODE-INTERNAL LEAKAGE OF ELECTROLYTE. CAUSED INTERNAL SHORT CIRCUIT AND INTENSE HEAT GENERATION. | | | | | | | |
| CORRECTIVE ACTION-VENDOR INSTALLED NEW DESIGN INCLUDING ELECTROLYTE OVERFLOW COLLECTION AND POTTING OF BATTERY OUTPUT TERMINALS. 50/C ACTION TO INSURE THAT ALL BATTERIES EMPLOY NEW DESIGN. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AE80-023R/FC-4CO-03-61 INVERTER | COMPOSITE-FACTORY | 61D 600310 | YES | NO | | 898179 |
| FAILURE MODE-ERRATIC OPERATION-JUST AFTER POWER CHANGEOVER FROM EXTERNAL TO INTERNAL, THE 28 VDC, INVERTER FREQUENCY AND 115 VAC CONTINUED TO VARY AT ABOUT 2 CPS FOR THE REMAINING 4 SECONDS THIS FUNCTION WAS RECORDED. IT APPEARED TO BE SLOWLY DAMPING AND DID NOT REAPPEAR DURING THE PROGRAMMED PORTION OF THE TEST. | | | | | | | |
| SYSTEM EFFECT-ERRATIC OPERATION. AIRBORNE ELECTRIC SYSTEM WAS ERRATIC SHORTLY AFTER CHANGE OVER VARIATIONS APPEARED TO DAMP OUT AND DID NOT AFFECT PERFORMANCE OF VEHICLE. | | | | | | | |
| VEHICLE EFFECT-COMPOSITE DELAYED. POST-COMPOSITE TESTS MADE TO TRY TO REPEAT ANOMALY. SYSTEM PERFORMED SATISFACTORILY. | | | | | | | |
| CORRECTIVE ACTION-NOT KNOWN. | | | | | | | |

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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO |
|---|---|--------------------------------|---------------------|------------------|------------|-------------------------------|
| ELECTRICAL-A/B POWER SOURCE | 98-14-037 MAIN MISSILE INVERTER | FAR 7-08349-3 | 29D 800308 | FACTORY | YES NO | YES BEMOIX |
| FAILURE MODE-THE INVERTERS OUTPUT FREQUENCY WAS OUT OF TOLERANCE. | | | | | | |
| CORRECTIVE ACTION-EACH INVERTER IS INSPECTED FOR NORMAL OPERATION AND ENGINEERING CONCURRENCE PRIOR TO RELEASE FOR MISSILE USE. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 98-14-038 BATTERY | FAR 27-06359-3 | 42D 600301 | FACTORY | YES NO | YES YARDNEY ELECT |
| FAILURE MODE-OUT OF SPECIFICATION. UPON BATTERY ACTIVATION THE OUTPUT VOLTAGE WAS OUT OF SPECIFICATION. | | | | | | |
| CORRECTIVE ACTION-VENDOR IMPROVED INSPECTION OF ALL SQUIDS FOR CORRECT AMOUNT OF EXPLOSIVE MATERIAL. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 98-18-017 BATTERY. NSC | FAR 27-06380-1 | 42D 600303 | ETR | YES NO | ELECTRIC STORA GE BATTERY |
| FAILURE MODE-ELECTRICAL SHORT. UPON CIRCUIT OUTPUT VOLTAGE FAILED TO REACH MINIMUM ACCEPTABLE VALUE. INCORRECTLY IN STALLED PLATE CAUSED SHORT IN ONE CELL. ELECTROLYTE LEAKED. BACK OF ACTIVATION SQUIDS NOT POTTED. | | | | | | |
| CORRECTIVE ACTION-THE VENDOR WILL REMOV ALL BATTERIES TO INCLUDE 1. POT BACKS OF CONNECTORS AND ENCAPSULATE SQUID ACTIVATION RESISTOR TERMINAL BOARDS TO PREVENT ELECTROLYTE SHORTING. 2. PLACE A SYNTHANE SHEET BETWEEN ACTIVATE AND ELECTROLYTE CYLINDER AND THE NEOPRENE HEATER BLANKET. 3. COAT BATTERY INSIDE WITH SEALER. 4. INSERT SYNTHANE BETWEEN TERMINAL BOARD AND THERMOSTAT. 5. ENCAPSULATE ALL THERMOSTATS TO PREVENT SHORTING. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 98-18-018 BATTERY | FAR 27-06380-1 | 42D 600300 | ETR | YES NO | ELECTRIC STORA GE BATTERY |
| FAILURE MODE-FAIL DURING OPERATION-OPEN CIRCUIT OUTPUT VOLTAGE DROPPED BELOW MINIMUM ACCEPTABLE LEVEL. ELECTROLYTE LEAKED THROUGH BATTERY WALL CAUSING BATTERY DISCHARGE BECAUSE BACK OF ACTIVATION SQUIDS NOT POTTED. | | | | | | |
| CORRECTIVE ACTION-THE VENDOR WILL REMOV ALL BATTERIES TO INCLUDE 1. POT BACKS OF CONNECTORS AND ENCAPSULATE SQUID ACTIVATION RESISTOR TERMINAL BOARDS TO PREVENT ELECTROLYTE SHORTING. 2. PLACE A SYNTHANE SHEET BETWEEN ACTIVATE AND ELECTROLYTE CYLINDER AND THE NEOPRENE HEATER BLANKET. 3. COAT BATTERY INSIDE WITH SEALER. 4. INSERT SYNTHANE BETWEEN TERMINAL BOARD AND THERMOSTAT. 5. ENCAPSULATE ALL THERMOSTATS TO PREVENT SHORTING. | | | | | | |

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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO |
|---|---|--------------------------------|---------------------|------------------|------------|-------------------------------|
| ELECTRICAL-A/B POWER SOURCE | PTA899/P1-402-00-42 RSC BATTERIES | PNF | 420 600223 | 11 | YES NO | 091073 |
| FAILURE MODE-OUT OF SPECIFICATION. RSC BATTERIES WERE BELOW REDLINE. ONE BATTERY WAS REMOVED; THE OTHER BATTERY WAS ACTIVATED BUT IT WAS BELOW REDLINE AND OVERHEATING. IT WAS REMOVED AND THE FIRST BATTERY REINSTALLED EVEN THOUGH IT WAS OUT OF TOLERANCE. | | | | | | |
| SYSTEM EFFECT-OPERATION TOO LOW. RSC BATTERIES WERE BELOW REDLINE. | | | | | | |
| VEHICLE EFFECT-COUNTDOWN DELAYED. 30 MINUTE HOLD. | | | | | | |
| CORRECTIVE ACTION-USED MANUALLY ACTIVATED BATTERIES FOR FLIGHT. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AE80-0198/FC-400-02-590 INVERTER-HARNESS | COMPOSITE-FACTORY | 590 600222 | | NO NO | 094021 |
| FAILURE MODE-OUT OF TOLERANCE-AT UNBILICAL EJECT THE INVERTER MALFUNCTIONED. IT WAS DISCOVERED THAT DISCONNECTING P 7/J 1033 OPENED THE NEGATIVE REMOTE SENSING LEAD EFFECTIVELY APPLYING ABOUT 5 VDC TO THE MISSILE INVERTER. THE INVERTER WAS REPLACED AND THE SUBSEQUENT SYSTEM AND POST-COMPOSITE WAS SUCCESSFUL. | | | | | | |
| SYSTEM EFFECT-OPERATION TOO HIGH. INVERTER SPEED TOO HIGH. CAUSED BY OPEN CIRCUIT IN VOLTAGE SENSE LINE. | | | | | | |
| VEHICLE EFFECT-COMPOSITE DELAYED. POST COMPOSITE TESTING REQUIRED TO SHOW SATISFACTORY OPERATION. | | | | | | |
| CORRECTIVE ACTION-A CHANGE IN THE WIRING WAS INITIATED TO PREVENT RECURRENCE. ALSO THE INVERTER WAS REPLACED. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AE80-0198/FC-400-01-59 INVERTER-HARNESS | COMPOSITE-FACTORY | 590 600219 | | NO NO | 094022 |
| FAILURE MODE-OUT OF TOLERANCE-AT UNBILICAL EJECT THE INVERTER RAN AWAY. A HIGH IMPEDENCE TO GROUND WAS FOUND IN THE BATTERY SIMULATOR CABLE WHICH WAS REPAIRED PRIOR TO RERUNNING THE COMPOSITE TEST. | | | | | | |
| SYSTEM EFFECT-OPERATION TOO HIGH. INVERTER SPEED TOO HIGH. CAUSED BY HIGH IMPEDANCE TO GROUND IN CABLE. | | | | | | |
| VEHICLE EFFECT-COMPOSITE RESCHEDULED. RE-RUN OF COMPOSITE MADE. | | | | | | |
| CORRECTIVE ACTION-INVERTER REPLACED AND CABLE FIXED. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | PTA8973/P4-400-01-29 INVERTER | COMPOSITE-FRD/DPL | 290 600218 | 14 | YES NO | |
| FAILURE MODE-MISSILE INVERTER EXHIBITED MINOR OSCILLATIONS. | | | | | | |
| SYSTEM EFFECT-NONE. | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | |

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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|---|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| CORRECTIVE ACTION-SYSTEM PERFORMANCE WAS ACCEPTABLE BUT INVERTER WAS CHANGED TO ASSURE SYSTEM CONFIDENCE. | | | | | | | 094801 |
| ELECTRICAL-A/B POWER SOURCE | FTAS98/PA-4CO-02-28 BATTERY | COMPOSITE-J FACT | 290 800218 | 14 | YES NO | | 095903 |
| FAILURE MODE-FAIL TO OPERATE AT PRESCRIBED TIME. MISSILE POWER COULD NOT BE TRANSFERRED FROM EXTERNAL TO INTERNAL. OPERATION ON INTERNAL POWER COULD NOT TAKE PLACE BECAUSE THE TEST BATTERY USED HAD NOT BEEN MODIFIED FOR USE WITH THE REMOTELY CONTROLLED BATTERY ACTIVATION HARNESS INSTALLED ON MISSILE. | | | | | | | |
| SYSTEM EFFECT-OPERATION DOES NOT START. | | | | | | | |
| VEHICLE EFFECT-COMPOSITE DELAYED. 8 MINUTES HOLD. | | | | | | | |
| CORRECTIVE ACTION-THE RELAY CONTACTS ASSOCIATED WITH THE BATTERY ACTIVATION OPERATION WERE JUMPED. | | | | | | | 094376 |
| ELECTRICAL-A/B POWER SOURCE | 98-14-033 INVERTER | FAR 7-08349-3 | 290 800213 | ETR | YES NO | BENDIX 32877 | |
| FAILURE MODE-OUT OF SPECIFICATION. INVERTER OUTPUT FREQUENCY AND VOLTAGE OUT OF TOLERANCES. | | | | | | | |
| CORRECTIVE ACTION-VENDOR INSTALLED SPECIAL LUBRICATING TYPE ELECTRICAL BRUSHES. DATED EFFECTIVITY OF DEC. 1959. | | | | | | | 096784 |
| ELECTRICAL-A/B POWER SOURCE | 98-14-038 MAIN MISSILE INVERTER | FAR 7-08349-3 | 490 800210 | FACTORY | YES NO | BENDIX | |
| FAILURE MODE-THE INVERTERS OUTPUT VOLTAGE AND FREQUENCY WERE OUT OF TOLERANCE. | | | | | | | |
| CORRECTIVE ACTION-60/C IS MAINTAINING CLOSE SURVEILLANCE OF THESE ITEMS DURING FACTORY INSPECTION TO MINIMIZE RECURRANCE. | | | | | | | |
| ELECTRICAL-A/D POWER SOURCE | FTAS90/PI-401-00-42 MISSILE MAIN BATTERY | FRF | 420 800204 | 11 | YES NO | | 091603 |
| FAILURE MODE-FAIL TO OPERATE AT PRESCRIBED TIME. THE MISSILE MAIN BATTERY FAILED TO ACTIVATE. | | | | | | | |
| SYSTEM EFFECT-OPERATION DOES NOT START. THE MISSILE MAIN BATTERY FAILED TO ACTIVATE. | | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | | |
| CORRECTIVE ACTION-CONTINUE TEST ON EXTERNAL POWER. | | | | | | | |

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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF TIME DIF | SITE | PRI OTH | VENDOR NAME VENDOR PART NO |
|---|---|--------------------------------|------------------------------|-------------|------------|-------------------------------|
| ELECTRICAL-A/B POWER SOURCE | PTAG900/P1-401-00-4R RSC BATTERY | PRF | 420 600504 | 11 -7820 | YES NO | |
| <p>FAILURE MODE-ELECTRICAL SHORT. THE RSC REMOTELY ACTIVATED BATTERY EXPLODED 7 MINUTES AFTER ACTIVATION, APPARENTLY DUE TO AN INTERNAL SHORT. PLUG P-806-2 WAS DAMAGED.</p> <p>SYSTEM EFFECT-OPERATION STOPS PREMATURELY. SYSTEM POWER LOST.</p> <p>ENGINE EFFECT-COUNTDOWN DELAYED. HOLD TIME 90 MINUTES.</p> <p>CORRECTIVE ACTION-BATTERY AND PLUG REPLACED.</p> | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 9B-16-014 BATTERY, RSC | FAR 27-06380-1 | 420 600200 | ETR | YES NO | ELECTRIC STORE GE BATTERY |
| <p>FAILURE MODE-SHORT (ELECT.)-EXPANSION FROM THE EXOTHERMIC REACTION OF THE POTTING COMPOUND DURING MANUFACTURE, PLUS HEAT FROM THE HEATER BLANKET. PINCHED THE HEATER WIRES AND SHORTED THEM. THE SHORTED HEATER BURNED A HOLE IN THE BATTERY CELL WALL, SPILLING ELECTROLYTE IN THE PLUG AREA.</p> <p>CORRECTIVE ACTION-THE VENDOR IS REMARKING ALL BATTERIES TO INCLUDE: 1. ADDITION OF A PHENOLIC SHEET BETWEEN THE ACTIVATIC CYLINDER ASSEMBLY AND THE HEATER BLANKET. 2. POTTING OF THE OUTPUT CONNECTORS. 3. INSULATING EXPOSED TERMINAL BOARD CIRCUITRY. 4. INSULATING THE BATTERY PACK FROM THE CABINET.</p> | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 9B-16-012 BATTERY HEATER | FAR 27-06380-1 | 490 600200 | ETR | YES NO | ELECTRIC STORE GE BATTERY |
| <p>FAILURE MODE-OUT OF EXPECTED TEST VALUE-BATTERY OUTPUT READ 26.2 VDC AND 28.5 VDC. TOLERANCE LIMITS ARE 23.2 VDC AND 27.8 VDC. THE 24 OHM RESISTORS IN THE BATTERY HEATER THERMOSTAT FAILED RESULTING IN A LOWER BATTERY OPERATING TEMPERATURE. LOWER TEMPERATURES RESULT IN LOWER BATTERY OUTPUT VOLTAGE.</p> <p>CORRECTIVE ACTION-VENDOR IS INCORPORATING FOLLOWING DESIGN CHANGES: (1.) REMOVE END OF GROUNDING EAR UNDER ONE OF THE 500 OHM RESISTORS ON TERMINAL BOARD. (2.) INSTALL A STYRENE INSULATOR UNDER 500 OHM CIRCUIT RESISTOR. (3.) ENCAPSULATE THE 500 OHM RESISTORS. (4.) INSERT THERMAL INSULATOR BETWEEN 500 OHM RESISTORS AND HEATER THERMOSTAT. (5.) ENCAPSULATE ALL THERMOSTATS AND OUTPUT CONNECTORS.</p> | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 9B-14-038 BATTERY | FAR 27-06389-901 | 420 600181 | FACTORY | YES NO | YARDNEY ELECT |
| <p>FAILURE MODE-OUT OF SPECIFICATION. THE BATTERIES HEATER EXCEEDED THE HIGH TEMPERATURE SPECIFICATION. DUE TO A MALFUNCTIONING THERMOSTAT.</p> | | | | | | |

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GENERAL DYNAMICS
CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF TIME | SITE DIF TIME | PRI OTH | VEHICLE NAME VENDOR PART NO |
|--|---|--------------------------------|--------------------------|------------------|----------------------------------|--------------------------------|
| CORRECTIVE ACTION-NO CORRECTIVE ACTION WAS INITIATED SINCE THE FAILURE WAS NOT CONFIRMED. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 98-14-031 INVERTER | FAR 7-06349-3 | 43D 800114 | FACTORY | YES BENJIX NO 32877 | 094377 |
| FAILURE MODE-OUT OF TOLERANCE. THE STATED FAILURE WAS NOT CONFIRMED. | | | | | | |
| CORRECTIVE ACTION-NO CORRECTIVE ACTION WAS INITIATED SINCE THE FAILURE WAS NOT CONFIRMED. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 99-14-011 BATTERY | FAR 7-06380-3 | 60010U | FACTORY | YES YARDNEY ELECTRA NO IC CO. | 094376 |
| FAILURE MODE-SHORT (ELECT); THE BATTERY OVERHEATED; THE CELL INTERCONNECTING LINKS MELTED; A HIGH RESISTANCE SHORT Y O CASE EXISTED; ONE OF THE CONNECTING LEADS TO J008 WAS BURNED. THE BATTERY WAS INADVERTENTLY SUBJECTED TO AN EXCESSIVE VE CHARGE PERIOD CAUSING THE OVERHEATING. | | | | | | |
| CORRECTIVE ACTION-THE FAILURE WAS CAUSED BY HUMAN ERROR IN NOT MAINTAINING PROPER SURVEILLANCE OF THE BATTERY DURING G CHARGING. IN THE FUTURE THE BATTERY WILL BE PROCESSED ACCORDING TO MPS 21-07 AND 21-08 WHICH REQUIRE COMPLETE RECORDS TO BE MAINTAINED. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 98-14-030 INVERTER DIODE | FAR 7-06349-3 | 43D 591229 | FACTORY | YES BENJIX NO 32877 | 094376 |
| FAILURE MODE-ELECTRICAL SHORT. THE INVERTER EXPERIENCED AN INTERMITTENT SHORT CIRCUITED DIODE CR-9. | | | | | | |
| CORRECTIVE ACTION-NO CORRECTIVE ACTION WAS INITIATED. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | PTAG103/P3-4CO-01-43 INVERTER | COMPOSITE-B FACT | 43D 591229 | 13 | NO NO | 094376 |
| FAILURE MODE-FAILED DURING OPERATION. TELEMETERED DATA INDICATED THAT INVERTER VOLTAGE AND FREQUENCY REGULATION C/A RACTERISTICS WERE LESS THAN DESIRED ALTHOUGH THE SYSTEM PARAMETERS REMAINED WITHIN SPECIFICATIONS THROUGHOUT THE TEST. | | | | | | |
| SYSTEM EFFECT-NONE. | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | |
| CORRECTIVE ACTION-REPLACED INVERTER AFTER THE TEST. | | | | | | |

GENERAL DYNAMICS
CONVAIR DIVISION

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DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | SITE TIME DIP | PRI OTH | VENDOR NAME VENDOR PART NO | |
|--|---|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| ELECTRICAL-A/B POWER SOURCE | 98-14-028 INVERTER | FAR 7-08349-3 | 200 591200 | FACTORY | YES NO | BENDIX NO 32877 | 000910 |
| FAILURE MODE-OUT OF TOLERANCE. THE INVERTER OUTPUT FREQUENCY AND VOLTAGE FLUCTUATED TO OUT OF TOLERANCE CONDITION. | | | | | | | |
| CORRECTIVE ACTION-60/C HAS INITIATED VENDOR CORRECTIVE ACTION AND REINSPECTION OF 60/C STOCK. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 98-14-028 INVERTER CAPACITOR | FAR 7-0834-3 | 200 591200 | ETR | YES NO | BENDIX NO 32877 | 004379 |
| FAILURE MODE-ELECTRICAL SHORT. THE INVERTER EXPERIENCED AN INTERMITTENT SHORT CIRCUITED FILTER CAPACITOR. | | | | | | | |
| CORRECTIVE ACTION-60/C HAS INITIATED VENDOR CORRECTIVE ACTION AND REINSPECTION OF 60/C STOCK. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 98-18-009 POWER SUPPLY-TRANSISTOR | FAR 7-36216 | 160 591200 | ETR | YES YES | 60/C | 000069 |
| FAILURE MODE-FAIL DURING OPERATION-DURING PCS CHECKS THE POWER SUPPLY INPUT VOLTAGE DROPPED ABRUPTLY FROM 26.5 VOLT 8 TO 15 VOLTS WHEN SWITCHING TO INTERNAL POWER. BOTH JUNCTIONS IN TRANSISTOR 8-901 WERE BROKEN DOWN. A SECOND POSSIBILITY FOR THE CAUSE OF THE FAILURE IS INTERSTAGE TRANSFORMER-901 WHICH HAD BURNED OUT WINDINGS. | | | | | | | |
| CORRECTIVE ACTION-SINCE THE CAUSE OF FAILURE HAS NOT BEEN CONCLUSIVELY DETERMINED, 60/C IS MAINTAINING SURVEILLANCE OF THIS TYPE OF FAILURE. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 98-18-009 POWER SUPPLY-TRANSFORMER | FAR 7-36216 | 160 591200 | ETR | YES YES | 60/C | 000070 |
| FAILURE MODE-FAIL DURING OPERATION-DURING PCS CHECKS THE POWER SUPPLY INPUT VOLTAGE DROPPED ABRUPTLY FROM 26.5 VOLT 8 TO 15 VOLTS WHEN SWITCHING TO INTERNAL POWER. THE WINDINGS IN INTERSTAGE TRANSFORMER 1-901 WERE BURNED OUT. A SECOND NO POSSIBILITY FOR THE CAUSE OF FAILURE IS TRANSISTOR 8-901 WHICH HAD BOTH JUNCTIONS BROKEN DOWN. | | | | | | | |
| CORRECTIVE ACTION-SINCE THE CAUSE OF FAILURE HAS NOT BEEN CONCLUSIVELY DETERMINED, 60/C IS MAINTAINING SURVEILLANCE OF THIS TYPE OF FAILURE. | | | | | | | |

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CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|---|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| ELECTRICAL-A/B POWER SOURCE | 9D-14-027 INVERTER | FAN 7-06349-3 | 210 59118 | WTR | YES NO | BENDIX NO 32877 | 994919 |
| FAILURE MODE-OUT OF TOLERANCE. THE INVERTERS OUTPUT VOLTAGE DROPPED OUT OF TOLERANCE. | | | | | | | |
| CORRECTIVE ACTION-NONE CORRECTIVE ACTION INITIATED CONSIDERED AN ISOLATED CASE. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AZC-27-083/P3-401-00-26 INVERTER | FLIGHT | 280 591104 | 13 84.51 | NO NO | | 998714 |
| FAILURE MODE-OUT OF SPECIFICATION. AT 84.51, 271.8, AND 289.3 SECOND MALFUNCTIONS EXTERNAL TO THE ELECTRICAL SYSTEM CAUSED D-C WOLTAGE, A-C VOLTAGE, AND A-C FREQUENCY TO EXCEED SPECIFICATION LIMITS. THE MALFUNCTIONS RESULTED IN SEV ENE ELECTRICAL TRANSIENTS. | | | | | | | |
| SYSTEM EFFECT-ERRATIC OPERATION. | | | | | | | |
| VEHICLE EFFECT-NONE. ALTHOUGH USER SYSTEMS REFLECTED SOME OF THE TRANSIENTS, NO ADVERSE MISSILE EFFECTS WERE OBSERVED. | | | | | | | |
| CORRECTIVE ACTION-NONE. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AZC-27-082/P1-401-00-26 BATTERY | FLIGHT | 280 591029 | 11 299.1 | NO NO | | 996880 |
| FAILURE MODE-SHORT (SELECT). FOLLOWING VECO, TRANSIENTS WERE NOTED IN ALL THREE ELECTRICAL SYSTEM PARAMETERS. THE TR ANSIENT DURATION WAS BETWEEN 1.5 AND 2.5 SECONDS AND COMMENCED AT 299.1 AND 329.2 SECONDS. IT WAS CONCLUDED THAT THE TRANSIENTS WERE CAUSED BY A SHORT CIRCUIT IN THE PHOTOFLASH SYSTEM CAUSING A MOMENTARY DRAIN ON THE MAIN BATTERY. | | | | | | | |
| SYSTEM EFFECT-ERRATIC OPERATION. | | | | | | | |
| VEHICLE EFFECT-NONE. REQUIRED FLIGHT FUNCTIONS HAD BEEN COMPLETED. | | | | | | | |
| CORRECTIVE ACTION-NONE. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | PTA6265/P1-401-00-26 INVERTER | COUNTDOWN | 280 591029 | 11 -1800 | NO NO | | |
| FAILURE MODE-FAIL DURING OPERATION. MISSILE 400 CYCLE POWER LOST BECAUSE OF 400 CYCLE FLUCTUATION DUE TO RANGE CRIT ICAL POWER PROBLEM. | | | | | | | |
| SYSTEM EFFECT-OPERATION STOPS PREMATURELY. LOST MISSILE 400 CYCLE POWER DUE TO RANGE CRITICAL POWER PROBLEM. | | | | | | | |
| VEHICLE EFFECT-COUNTDOWN DELAYED. HELD FOR 15 MINUTES TO RESET 400 CYCLE GENERATOR IN TRANSFER ROOM. | | | | | | | |

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GENERAL DYNAMICS
CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|---|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| CORRECTIVE ACTION-RJ-51 400 CYCLE GENERATOR IN TRANSFER ROOM. | | | | | | | 990362 |
| ELECTRICAL-A/B POWER SOURCE | 98-14-028 BATTERY | FAR 27-06399-1 | 170 501020 | FACTORY | YES NO | F R COOK CO NO P51A | 994993 |
| FAILURE MODE-SHORT (ELECTRICAL). INTERNAL SHORT CIRCUIT TO CASE FROM ELECTROLYTE LEAKAGE. | | | | | | | |
| CORRECTIVE ACTION-60/C HAS INITIATED IMPROVED BATTERY DESIGN AND QUALITY CONTROL AT THE VENDOR. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 98-14-025 INVERTER | FAR 7-06349-3 | 100 590925 | FACTORY | YES NO | BENDIX NO 32877 | 994920 |
| FAILURE MODE-OUT OF TOLERANCE. THE INVERTER'S OUTPUT FREQUENCY AND VOLTAGE FLUCTUATED OUT OF TOLERANCE. | | | | | | | |
| CORRECTIVE ACTION-60/C INITIATED ACTION TO IMPROVE VENDOR INSPECTION OF COMPONENT ASSEMBLY. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AZC-27-078/PS-403-00-17 MAIN MISSILE BATTERY | COUNTDOWN | 170 590919 | 15 | YES NO | | 992064 |
| FAILURE MODE-OUT OF TOLERANCE. FLIGHT COUNTDOWN ABORTED DUE TO FAILURE OF MAIN MISSILE BATTERY. (NO FURTHER DATA). | | | | | | | |
| SYSTEM EFFECT-ERRATIC OPERATION. | | | | | | | |
| VEHICLE EFFECT-COUNTDOWN ABORTED AND RESCHEDULED. | | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | AZC-27-054/PS-403-00-14 INVERTER | FLIGHT | 140 590911 | 13 503 | YES NO | | 990929 |
| FAILURE MODE-OUT OF TOLERANCE. INVERTER A-C VOLTAGE REACHED ITS UPPER SPECIFICATION LIMIT OF 118.7 VOLTS AT 563 SEC ONDS. A STEADY INCREASE FROM 115.8 VOLTS AT 322.5 SECONDS CONTINUED UNTIL A LEVEL OF 117.9 VOLTS WAS REACHED AT 900 SECONDS. THE INCREASE IS ATTRIBUTED TO A TEMPERATURE RISE INSIDE THE INVERTER CANISTER. | | | | | | | |
| SYSTEM EFFECT-OPERATION TO HIGH. HOWEVER, SYSTEM NOT REQUIRED TO FUNCTION AT THIS TIME. | | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | | |
| CORRECTIVE ACTION-NONE. | | | | | | | |

GENERAL AMICS
CONVAIR DIVISION

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DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|--|---|--------------------------------|---------------------|------------------|-----------------------|-------------------------------|--------|
| ELECTRICAL-A/B POWER SOURCE | PTAB09/P4-402-00-10 SIMULATOR, INVERTER | FAP | 100 390803 | 14 -2100 | NO NO | | 091020 |
| FAILURE MODE-ERRATIC OPERATION. FREQUENCY CONTROL OF GROUND 400 CYCLE GENERATOR COULD NOT BE MAINTAINED AND FREQUENCY INCREASED TO 405 CPS. | | | | | | | |
| SYSTEM EFFECT-OPERATION TOO HIGH. GROUND SUPPLIED AC FREQUENCY OF 405 CPS WAS TOO HIGH. | | | | | | | |
| VEHICLE EFFECT-COUNTDOWN DELAYED. 10 MINUTE HOLD. | | | | | | | |
| CORRECTIVE ACTION-HOLD TO INVESTIGATE. DURING THE HOLD, FREQUENCY DECREASED TO 401 CPS. AFTER OBSERVING NORMAL STEADY OPERATION FOR 4 MINUTES, TEST WAS RESUMED. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | PTAB08/P4-400-01-10 INVERTER | COMPOSITE-B FACT | 100 390821 | 14/ETR | YES NO | | 094070 |
| FAILURE MODE-ERRATIC OPERATION. INVERTER EXHIBITED POOR VOLTAGE AND FREQUENCY REGULATION CHARACTERISTICS THROUGHOUT THE TEST. | | | | | | | |
| SYSTEM EFFECT-ERRATIC OPERATION. THE INVERTER FREQUENCY OSCILLATED 3 CPS PEAK TO PEAK AND INVERTER VOLTAGE OSCILLATED 0.6 VAC PEAK TO PEAK AT A 2 CPS RATE. | | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | | |
| CORRECTIVE ACTION-INVERTER 8/N 14 REPLACED AFTER THE TEST. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 98-18-007 POWER SUPPLY-TRANSISTOR | FAR 7-36110-1 | RC 390803 | ETR | YES 60/C NO | | 094071 |
| FAILURE MODE-ELECTRICAL SHORT. TRANSISTOR 0904 SHORTED INTERNALLY. 9904 WAS AN OLDER TRANSISTOR THAT HAD NOT BEEN 6 AIM MATCHED. THE TRANSISTOR WAS INSTALLED DURING AN ACUTE TRANSISTOR SHORTAGE WHICH OCCURRED IN THE FACTORY. | | | | | | | |
| CORRECTIVE ACTION-60/C WILL REINSPECT THE 7-36110 POWER SUPPLIES TO VERIFY THAT THEY ARE IN SATISFACTORY CONDITION PRIOR TO THEIR USE ON D SERIES MISSILES. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 98-14-028 BATTERY | FAR 7-06359-3 | 390717 | ETR | YES P R COOK CO NO | | 094084 |
| FAILURE MODE-OUT OF SPECIFICATION. ACTION OF AN INDIVIDUAL CELL EXPERIENCING AN INTERNAL ELECTRICAL POTENTIAL REVERSAL, CAUSED BY INSUFFICIENT ELECTROLYTE. | | | | | | | |
| CORRECTIVE ACTION-60/C INITIATED VENDOR ACTION TO PREVENT THE LOW ELECTROLYTE CONDITION. | | | | | | | |

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GENERAL AMMICS
CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM | TEST/REPORT NUMBER | DIF DATA SOURCE | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME |
|---|---|------------------|------------------|---------------|------------------------|------------------|
| SUB-SYSTEM | FAILED COMPONENT NAME | PART NUMBER | DATE DIF | TIME DIF | OTH | VENDOR PART NO |
| ELECTRICAL-A/B POWER SOURCE | PTA3012/PE-302-00-08 MAIN MIBBLE BATTERY | PAF | 8C 590708 | 12/ETR 0 | NO NO | |
| FAILURE MODE-OUT OF TOLERANCE. AT T-O BATTERY HAD BEEN IN USE 8 MINUTES. REDLINE WAS 4 MINUTES. | | | | | | |
| SYSTEM EFFECT-NONE. | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | |
| CORRECTIVE ACTION-NONE. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 98-14-017 BATTERY | FAR 7-08359-1 | 8C 590618 | ETR | YES F R NO NO | COOK CO 370MS |
| FAILURE MODE-ELECTRICAL SHORT CIRCUIT OCCURRED WHEN TWO BATTERY CELLS EXPERIENCED ELECTRICAL POTENTIAL REVERSAL WHI CH CREATED INTERNAL BATTERY HIGH CURRENT FLOW, HEATING AND DESTRUCTION. | | | | | | |
| CORRECTIVE ACTION-RECOMMEND DISCONTINUANCE USE OF BATTERIES WITH MORE THAN TWO DISCHARGE CYCLES OR NO MORE THAN FOU R MONTHS LIFE RECORD. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 32-413-87-02 INVERTER | CAPTIVE | 2D 590618 | 52 93 | NO NO | |
| FAILURE MODE-ERRATIC OPERATION. DC VOLTAGES AND AC FREQUENCY TRANSIENTS APPEARED AT 95 SECONDS AND 202.7 SECONDS. D C WAS SUPPLIED FROM THE GROUND AND THE AIRBORNE INVERTER WAS OPERATING. AT 202.8 SECONDS THE DC VOLTAGE DROPPED TO 2 9.2 VOLTS. IT THEN ROSE TO 29.6 VOLTS BEFORE STABILIZING AT 27.6 VOLTS. AC FREQUENCY VARIED BETWEEN 408 AND 393 CPS. PANEL METER READING INDICATED DC VARIATIONS OF 28.8 TO 28.0 VOLTS. AC FREQUENCY OSCILLATED BETWEEN 398 AND 400 CPS. | | | | | | |
| SYSTEM EFFECT-ERRATIC OPERATION. INVERTER AFFECTED BY GROUND DC POWER PROBLEM. | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | |
| CORRECTIVE ACTION-NONE. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 98-14-016 INVERTER | FAR 7-08349-3 | 8D 590616 | ETR | YES BENDIX NO 32877 | |
| FAILURE MODE- THE INVERTERS OUTPUT FREQUENCY AND VOLTAGE WENT OUT OF TOLERANCE. | | | | | | |
| CORRECTIVE ACTION-THE ELECTRICAL DIFFERENCES BETWEEN THE VENDORS TEST POWER SUPPLY AND THOSE USED BY 60/C ARE ATTRI BUTED AS THE CAUSE OF THE INVERTER ANOMALY. THE VENDOR WAS SUPPLIED WITH THE SAME TYPE POWER SUPPLY USED BY 60/C. | | | | | | |

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GENERAL UNICS
CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|--|---|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| ELECTRICAL-A/B POWER SOURCE | 88-14-012 INVERTER | FAR 7-08348-3 | 2D 390931 | FACTORY | YES NO | BENDIX NO 32877 | 890815 |
| FAILURE MODE-OUT OF TOLERANCE. THE INVERTERS OUTPUT FREQUENCY AND VOLTAGE EXCEEDING TOLERANCE. | | | | | | | |
| CORRECTIVE ACTION-NONE. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | PTA4829/P4-401-00-07 MISSILE MAIN BATTERY HEATER | FRP | 7D 390908 | 14 | YES NO | | 890864 |
| FAILURE MODE-OUT OF TOLERANCE. BATTERY VOLTAGE WAS TOO LOW POSSIBLY FROM INADEQUATE HEATER ON TIME. HEATER WAS ACTIVATED AT MINUS 2 MINUTES. 30 MINUTES OF HEATING SHOULD BE APPLIED. BATTERY HEATER CIRCUITRY WAS INCORRECT. | | | | | | | |
| SYSTEM EFFECT-OPERATION TOO LOW. | | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | | |
| CORRECTIVE ACTION-CORRECT BATTERY HEATER CIRCUITRY. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | PTA4829/P4-401-00-07 INVERTER | FRP | 7D 390908 | 14 | YES NO | | 890868 |
| FAILURE MODE-OUT OF TOLERANCE. INVERTER VOLTAGE AND FREQUENCY VARIATIONS OCCURRED DURING THE TEST. FREQUENCY VARIATIONS LAGGED VOLTAGE VARIATIONS BY 0.5 SECONDS. FREQUENCY AND VOLTAGE VARIATIONS WERE LESS THAN 2 CPS AND 1VAC RESPECTIVELY. | | | | | | | |
| SYSTEM EFFECT-IMPROPER ANALOG SIGNALS. INVERTER VOLTAGE AND FREQUENCY VARIATIONS WERE OUT OF SPECIFICATION. | | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | | |
| CORRECTIVE ACTION-RUN CONFIDENCE CHECK. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 98-18-003 POWER SUPPLY-TRANSISTOR | FAR 7-36110-1 | 9C 390900 | ETR | YES NO | 60/C | 890872 |
| FAILURE MODE-ELECTRICAL SHORT. POWER SUPPLY FAILED DURING A FLIGHT ACCEPTANCE COMPOSITE TEST. OSCILLATOR TRANSISTOR 8908 FAILED INTERNALLY. TRANSISTOR 8908 HAD BOTH JUNCTIONS SHORTED TO ITS CASE, PROVIDING A COLLECTOR TO EMITTER SHORT. | | | | | | | |
| CORRECTIVE ACTION-THE SUBJECT POWER SUPPLY WAS REFURBISHED. SINCE THE FAILURE WAS CONSIDERED TO BE AN ISOLATED EARLY LIFE FAILURE OF THE 8908 TRANSISTOR, NO FURTHER CORRECTIVE ACTION WAS TAKEN. | | | | | | | |

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GENERAL HANICS
CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF TIME DIF | SITE ETR | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|---|--------------------------------|------------------------------|-------------|------------|-------------------------------|--------|
| ELECTRICAL-A/B POWER SOURCE | 98-14-009 BATTERY | FAR 7-08359-3 | 590487 | ETR | YES NO | F R COOK CO | 894888 |
| FAILURE MODE-OUT OF SPECIFICATION. BATTERY OPEN CIRCUIT VOLTAGE TOO LOW. | | | | | | | |
| CORRECTIVE ACTION-RECOMMEND THAT PERSONNEL FOLLOW PTR-E-002 HANDLING PROCEDURE. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 98-14-007 INVERTER | FAR 7-06349-3 | 7C 590424 | ETR | YES NO | BENDIX NO 32877 | 894812 |
| FAILURE MODE-ERRATIC OPERATION EXHIBITED BY A 30 SECOND TRANSIENT OCCURRING DURING POWER SOURCE SWITCHING. | | | | | | | |
| CORRECTIVE ACTION-RECALL AND REMARK ALL INVERTERS TO CORRECT EXCESSIVE VOLTAGE STABILIZING TIME. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 98-14-010 BATTERY | FAR 7-06359-3 | 590406 | ETR | YES NO | F R COOK CO | 894888 |
| FAILURE MODE-STRUCTURAL FAULTS AMONG CELLS. CRACKS WERE FOUND INTERNALLY. ANALYSIS FOUND THAT CRACKING COULD BE DUE TO UNSAFE ASSEMBLY PRACTICES. NO ELECTRICAL FAILURE OCCURRED. THIS FAILURE MODE OCCURRED TO THREE ADDITIONAL PART NUMBER BATTERIES. | | | | | | | |
| CORRECTIVE ACTION-RECOMMEND THAT PERSONNEL FOLLOW PTR-E-002 HANDLING PROCEDURE. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 24-7-671/FC-3CO-01-09 INVERTER | COMPOSITE-FACTORY | 9C 590320 | | YES NO | | 894804 |
| FAILURE MODE-OUT OF SPECIFICATION. INPUT DC VOLTAGE DURING POWER CHANGEOVER WAS 38.3 VOLTS. | | | | | | | |
| SYSTEM EFFECT-OPERATION TOO HIGH. | | | | | | | |
| VEHICLE EFFECT-COMPOSITE RESCHEDULED. SYSTEM RETESTED AND COMPLETE COMPOSITE RETEST. | | | | | | | |
| CORRECTIVE ACTION-INVERTER REPLACED. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | 98-14-004 BATTERY | FAR 7-64041-1 | 590189 | ETR | YES NO | CO/C | |
| FAILURE MODE-OUT OF SPECIFICATION. DURING 200 AMPERE LOAD THE BATTERY VOLTAGE DROPPED BELOW REDLINE TOLERANCE. | | | | | | | |

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DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | DATE TIME DIP | PRI OTH | VENDOR NAME VENDOR PART NO |
|--|--|--------------------------------|---------------------|------------------|------------|-------------------------------|
| CORRECTIVE ACTION-RECOMMEND CLOSE ADHERENCE TO PTA-4165A PROCEDURE. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | ZC-7-218/P2-303-00-04 INVERTER | FLIGHT | 4C 590127 | 12 0 | YES NO | 094009 |
| FAILURE MODE-ERRATIC OPERATION-A-C FREQUENCY TRANSIENTS WERE NOTED AT ENGINE START, BOOSTER AND SUSTAINER CUTOFF AND AT 237 AND 246 SECONDS. FREQUENCY VARIED AS LOW AS 385 CPS (TOLERANCE 384 TO 402) HOWEVER, USER SYSTEMS OPERATION WAS NOT AFFECTED. LARGEST TRANSIENT OCCURRED AT BECO WHEN 408 CPS WAS RECORDED. | | | | | | |
| SYSTEM EFFECT-NONE. | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | PTA4587/P1-201-00-11 BATTERY-MAIN MISSILE | PNP | 11B 590120 | 11 -60 | YES NO | 091950 |
| FAILURE MODE-FAIL DURING OPERATION. RESISTANCE OF ONE BATTERY CELL WAS LOWER THAN OTHER CELLS CAUSING REVERSE CHARGING. | | | | | | |
| SYSTEM EFFECT-OPERATION TOO LOW. MAIN MISSILE BATTERY VOLTAGE WENT BELOW REDLINE AT MINUS 60 SECONDS. | | | | | | |
| VEHICLE EFFECT-COUNTDOWN DELAYED. 8 MINUTE HOLD AND 8 MINUTE RECYCLE. | | | | | | |
| CORRECTIVE ACTION-THE TEST WAS PERFORMED UTILIZING COMPLEX DC POWER. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | ZM-7-654/PC-350-00A-03 INVERTER | COMPOSITE-FACTORY | 5C 590119 | | YES NO | 097413 |
| FAILURE MODE-FAILED DURING OPERATION-INVERTER MALFUNCTIONED AND TURNED OUT WHILE CHANGING OVER FROM INTERNAL TO EXTERNAL POWER. | | | | | | |
| SYSTEM EFFECT-OPERATION STOPS PREMATURELY DUE TO LOSS OF POWER. | | | | | | |
| VEHICLE EFFECT-COMPOSITE RESCHEDULED. SYSTEM AND COMPOSITE RETESTING WAS PERFORMED. | | | | | | |
| CORRECTIVE ACTION-INVERTER WAS REJECTED AND REPLACED. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | PTA4588/P1-28N-01-11 INVERTER | COMPOSITE-8 FACT | 11B 590109 | 11 -160 | NO NO | |
| FAILURE MODE-FAIL DURING OPERATION. CONTROL OF MISSILE INVERTER SPEED LOSS DUE TO INADEQUATE COOLING TIME BETWEEN OPERATING PERIODS. | | | | | | |

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| SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO |
|---|---|--------------------------------|------------------------------|------------------|-------------------------------|
| SUN-SYSTEM | | | | | |
| SYSTEM EFFECT-OPERATION TOO HIGH. INVERTER FREQUENCY WAS EXCESSIVELY HIGH DUE TO LOSS OF CONTROL OVER INVERTER SPEED. | | | | | |
| VEHICLE EFFECT-COMPOSITE DELAYED. 20 MINUTE HOLD. AND TWO MINUTE RECYCLE. | | | | | |
| CORRECTIVE ACTION-HOLD TO ALLOW INVERTER TO COOL DOWN. | | | | | |
| ELECTRICAL-A/B POWER SOURCE | ZC-7-215/P2-302-00-03 POWER SUPPLY | FLIGHT | 3C 12 581223 -4 | YES BENDIX NO | 094878 |
| FAILURE MODE-OUT OF SPECIFICATION. PLUS/MINUS 2 VOLTS AC TOLERANCE FOR PHASE A VOLTAGE WAS EXCEEDED WHEN VOLTAGE ROSE TO 120.5 VAC REMAINING THERE UNTIL 37.5 SECONDS WHEN IT DROPPED TO 118.5 VAC. AT BOOSTER CUTOFF VOLTAGE DROPPED TO 0.118 VAC. DC VOLTAGE INDICATED LEVEL SHIFTS AT SAME TIMES BUT 1/4 MAGNITUDE. DC INPUT TO INVERTER WAS ABOVE 25/30 V DC TOLERANCE. | | | | | |
| SYSTEM EFFECT-OPERATION TOO HIGH. PHASE A VOLTAGE OUT OF SPECIFICATION AND TOO HIGH FROM ENGINE START TO BECO. NOMINAL 115 VOLT OUTPUT OF INVERTER WAS 120.5 TO 118.5 VAC DURING THAT INTERVAL. | | | | | |
| VEHICLE EFFECT-NONE. NO EFFECTS APPARENT ON USER SYSTEMS. | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | |
| ELECTRICAL-A/B POWER SOURCE | FT44414/P1-203-00-10 INVERTER | FRP | 10B 11/CTR 581212 0 | YES BENDIX NO | 093607 |
| FAILURE MODE-OUT OF TOLERANCE. PHASE A VOLTAGE FLUCTUATED 0.2 TO 0.8 THROUGHOUT THE OPERATION, NOT EXCEEDING SPECIFICATION. | | | | | |
| SYSTEM EFFECT-ERRATIC OPERATION. | | | | | |
| VEHICLE EFFECT-NONE. | | | | | |
| CORRECTIVE ACTION-INVERTER REPLACED. | | | | | |
| ELECTRICAL-A/B POWER SOURCE | ZC-7-210/P4-203-00-12 INVERTER | FLIGHT | 12B 1A 581128 289.35 | YES BENDIX NO | |
| FAILURE MODE-OUT OF TOLERANCE-AT SUSTAINER CUTOFF THE AC INVERTER FREQUENCY EXCEEDED THE MAXIMUM TOLERANCE LIMIT OF 408 CPS. CAUSE UNKNOWN. | | | | | |
| SYSTEM EFFECT-OPERATION TOO HIGH-THE AC POWER SOURCE INCREASED IN FREQUENCY TO 415 CPS AT SUSTAINER CUT-OFF AND REMAINED 19.8 SECONDS TO RETURN TO TOLERANCE LIMIT. A SIMILAR BUT LESS EXTENSIVE TRANSIENT OCCURRED AT BOOSTER CUTOFF. | | | | | |
| VEHICLE EFFECT-NONE-NO DETRIMENTAL EFFECTS WERE OBSERVED ON ANY VEHICLE SYSTEMS. | | | | | |

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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | SITE TIME DIP | PRI OTH | VENDOR NAME VENDOR PART NO |
|--|---|--------------------------------|---------------------|------------------|------------|-------------------------------|
| ELECTRICAL-A/B POWER SOURCE | FTA4232/P4-201-00-06 INVERTER | FRF | 80 580806 | 14/ETR | YES NO | 093274 |
| FAILURE MODE-OUT OF TOLERANCE. MISSILE INVERTER FREQUENCY WAS 390 CPS WHICH IS NEAR THE LOWER TOLERANCE LIMIT OF 394 CPS. | | | | | | |
| SYSTEM EFFECT-OPERATION TOO LOW. | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | |
| CORRECTIVE ACTION-READJUSTED INVERTER TOWARD NOMINAL 400 CPS FREQUENCY. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | ZB-7-079/11-204-C1-07 INVERTER | CAPTIVE | 7B 580829 | 1-1 | NO NO | 094993 |
| FAILURE MODE-OUT OF SPECIFICATION. THE INVERTER WOULD NOT ATTAIN THE REQUIRED FREQUENCY OF 400 CPS AT CHANGE OVER FROM GROUND TO AIRBORNE. POST TEST CHECK OF THE SYSTEM REVEALED NO DISCREPANCIES. IT WAS LATER REVEALED THAT THE INVERTER REQUIRES A HALF-HOUR WARM-UP PERIOD IN ORDER TO MEET SPECIFICATIONS. | | | | | | |
| SYSTEM EFFECT-OPERATION TOO LOW. GROUND POWER WAS USED FOR THE RUN. | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | |
| CORRECTIVE ACTION-WARMUP INVERTER PRIOR TO SWITCH OVER. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | ZC-7-204/P1-203-00-03 POWER SUPPLY | FLIGHT | 5B 580829 | 11 74.3 | NO NO | 096096 |
| FAILURE MODE-OUT OF EXPECTED TEST VALUE. DC INPUT VOLTAGE TO MISSILE SYSTEMS AND AC VOLTAGE AND FREQUENCY FROM INVERTER DROPPED BELOW REQUIRED VALUES FOR FOUR SECONDS STARTING AT 74.3 SECONDS WHEN GUIDANCE RATE BEACON FAILURE CAUSED ELECTRICAL SYSTEM OVERLOAD. | | | | | | |
| SYSTEM EFFECT-OPERATION TOO LOW. POWER OUTPUT TO MISSILE SYSTEMS WAS TOO LOW FOR FOUR SECONDS WHEN RATE BEACON FAILURE CAUSED TEMPORARY OVERLOAD TO ELECTRICAL SYSTEM. | | | | | | |
| VEHICLE EFFECT-NONE. SIMILAR ELECTRICAL PROBLEMS CAUSED BY GUIDANCE RATE BEACON FAILURES ON 12A AND 4B. | | | | | | |
| CORRECTIVE ACTION-CAUSE OF GUIDANCE RATE BEACON FAILURES UNDER INVESTIGATION. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | ZB-7-617/FC-200-01-12 INVERTER | COMPOSITE-FACTORY | 12B 580815 | | YES NO | |
| FAILURE MODE-OUT OF TOLERANCE. THE INVERTER OUTPUT WAS OBSERVED TO VARY UP TO 0.8 VAC PEAK TO PEAK DURING THE TEST. | | | | | | |
| SYSTEM EFFECT-ERRATIC OPERATION-VOLTAGE REGULATION OF INVERTER WAS OBSERVED TO BE UNSTABLE. | | | | | | |

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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | SITE TIME DIP | PRI OTH | VENDOR NAME VENDOR PART NO | |
|--|---|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| VEHICLE EFFECT-COMPOSITE DELAYED. | | | | | | | 998002 |
| CORRECTIVE ACTION-THE INVERTER WAS REPLACED. SATISFACTORY OPERATION WAS INDICATED DURING SUBSEQUENT TESTING. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | ZC-7-204/P1-SC0-01-B BATTERY | COMPOSITE-J FACT | 59 980908 | 11 | YES NO | | 921876 |
| FAILURE MODE-FAILED DURING OPERATION. MISSILE BATTERY FAILED SHORTLY AFTER START OF TEST RUN. NO DETAILS AVAILABLE. | | | | | | | |
| SYSTEM EFFECT-OPERATION STOPS PREMATURELY. MISSILE SYSTEMS POWER LOST. | | | | | | | |
| VEHICLE EFFECT-COMPOSITE RESCHEDULED. | | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | ZC-7-208/P3-204-00-4 MISSILE INVERTER | FLIGHT | 48 980802 | 13 100 | NO NO | | 894381 |
| FAILURE MODE-OUT OF SPECIFICATION. MISSILE INVERTER FREQUENCY DROPPED MOMENTARILY TO 370 CPS AT THE TIME OF AN IMPACT PREDICTION FAILURE. | | | | | | | |
| SYSTEM EFFECT - ERRATIC OPERATION- 400 CPS POWER DROPPED TO A MOMENTARY 370 CPS. | | | | | | | |
| VEHICLE EFFECT-NONE-NO APPARENT EFFECT WAS OBSERVED ON ANY VEHICLE SYSTEM. | | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | PTA4088/P1-206-00-3 BATTERY-MAIN MISSILE | COUNTDOWN | 38 980715 | 11 -1 | YES NO | | 897606 |
| FAILURE MODE-FAIL DURING OPERATION-MAIN MISSILE BATTERY VOLTAGE DROPPED TO 24 VDC. | | | | | | | |
| SYSTEM EFFECT-OPERATION TOO LOW-BATTERY VOLTAGE DROPPED ABRUPTLY TO 24 VDC. | | | | | | | |
| VEHICLE EFFECT-COUNTDOWN DELAYED. 140 MINUTE HOLD AND 88 MINUTE RECYCLE AFTER REDLINE CUTOFF. | | | | | | | |
| CORRECTIVE ACTION-REPLACED BATTERY. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | ZB-7-079/82-512-84-01 BATTERY | CAPTIVE | 18 980616 | 82 | YES NO | | |
| FAILURE MODE-OUT OF SPECIFICATION. DURING DC CHANGE-OVER, AC VOLTAGE AND FREQUENCY INCREASED RAPIDLY OUT OF LIMITS. POST TEST INSPECTION REVEALED THAT THE BATTERY WAS NOT PRE-LOADED. | | | | | | | |

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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP TIME | SITE DIP TIME | PRI DIP TIME | VENDOR NAME VENDOR PART NO |
|--|--|--------------------------------|--------------------------|------------------|-----------------|-------------------------------|
| SYSTEM EFFECT-OPERATION TOO HIGH. VOLTAGE INCREASED TO 34 VOLTS. NORMAL LIMITS ARE 25 TO 30 VOLTS. VEHICLE EFFECT-NONE. CORRECTIVE ACTION-UNKNOWN. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | ZC-7-097/P2-103-00-10 INVERTER | FLIGHT | 16A 580603 | 12 | YES NO | VARO |
| FAILURE MODE-OUT OF SPECIFICATION OR TOLERANCE. GROSS TRANSIENTS IN INVERTER 400 CPS FREQUENCY OCCURRED AT ENGINE CUTOFF AND AT RANDOM INTERVALS THEREAFTER. BELIEVED DUE TO THE EFFECTS OF MISSILE INSTABILITY ON THE INVERTER CARBON-PILE VOLTAGE REGULATOR WHICH IS EXTREMELY ACCELERATION SENSITIVE. SYSTEM EFFECT-ERRATIC OPERATION. SINCE SERIES A ELECTRICAL POWER REQUIREMENTS ENDED AT ENGINE CUTOFF THE INVERTER TRANSIENTS HAD NO EFFECT ON SYSTEM PERFORMANCE. VEHICLE EFFECT-NONE. CORRECTIVE ACTION-VARO INVERTERS WERE REPLACED WITH BENDIX INVERTERS WHICH USES A MORE STABLE MAGNETIC-AMPLIFIER VOLTAGE REGULATOR. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | PTA3044/P2-103-00-10 MAIN MISSILE BATTERY | COUNTDOWN | 16A 580329 | 12 -80 | NO NO | |
| FAILURE MODE-OUT OF SPECIFICATION. MAIN MISSILE BATTERY OUTPUT INDICATED BELOW REDLINE VALUE. SYSTEM EFFECT-OPERATION TOO LOW. MISSILE POWER DC PANEL METER INDICATED 25.4 VDC. END TO END CALIBRATION SHOWED METER READ 2VDC LOW. VEHICLE EFFECT-COUNTDOWN DELAYED. 138 MINUTES HOLD. 69 MINUTES RECYCLE. CORRECTIVE ACTION-RECALIBRATED PANEL METER. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | ZC-7-091-10A/P2-107-00-10 INVERTER | FLIGHT | 10A 580110 | 12 55 | YES NO | |
| FAILURE MODE-OUT OF SPECIFICATION. AT 55 SECONDS A TRANSIENT OSCILLATION IN INVERTER FREQUENCY OF PLUS OR MINUS CPS WAS EXPERIENCED. ALSO, AT 135.8 SECONDS THE FREQUENCY DECREASED TO 385 CPS FOR 0.9 SECONDS. REASON UNKNOWN. SYSTEM EFFECT-OPERATION ERRATIC. VEHICLE EFFECT-NONE. CORRECTIVE ACTION-RECOMMENDED TO INCREASE THE SENSITIVITY OF THE MEASUREMENT WHICH MONITOR THE BATTERY LOW INVERTER VOLTAGES. IT IS IMPOSSIBLE, WITH THE SENSITIVITY PRESENTLY AVAILABLE TO DETECT WHETHER THESE VOLTAGES ARE WITHIN THE PLUS OR MINUS PERCENT ACCURACY LIMITS. | | | | | | |

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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | JIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO |
|---|--|--------------------------------|---------------------|------------------|------------|-------------------------------|
| ELECTRICAL-A/B POWER SOURCE | ZC-T-091-10A/P2-107-00-10 BATTERY | FLIGHT | 10A 580110 | 12 135.9 | YES NO | 993900 |
| FAILURE MODE-OUT OF SPECIFICATION. THE BATTERY VOLTAGE DECREASED AT 135.9 SECONDS TO 23.5 VDC FOR A DURATION OF 0.9 SECONDS. REASON UNKNOWN. | | | | | | |
| SYSTEM EFFECT-OPERATION TO LOW. MOMENTARILY. | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. RECOMMENDED TO INCREASE THE SENSITIVITY OF THE MEASUREMENT WHICH MONITOR THE BATTERY AND INVERTER VOLTAGES. IT IS IMPOSSIBLE WITH THE SENSITIVITY PRESENTLY AVAILABLE TO DETECT WHETHER THESE VOLTAGES ARE WITHIN THE ACCURACY LIMITS. | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | ZC-T-093-12A/P4-102-00-12 INVERTER | FLIGHT | 12A 571217 | 14 76. | NO NO | 894797 |
| FAILURE MODE-SHORT. MOMENTARY DROP IN INVERTER VOLTAGE AT 76.0 SECONDS. APPARENTLY A SHORT DEVELOPED IN THE 6C GUIDANCE EQUIPMENT AND THE ENSUING OVERLOAD DREW THE INVERTER OUTPUT DOWN UNTIL THE INVERTER RECOVERED ITS STABLE OUTPUT 2 SECONDS LATER. | | | | | | |
| SYSTEM EFFECT-OPERATION TOO LOW MOMENTARILY. | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | |
| ELECTRICAL-A/D POWER SOURCE | ZM-T-550/FC-100-01-15 BATTERY, RSC | COMPOSITE-FACTORY | 15A 571207 | | YES NO | 899377 |
| FAILURE MODE-FAIL TO OPERATE AT PRESCRIBED TIME. RANGE BATTERY REASON DID NOT OPERATE DURING THE TEST, DUE TO FAILURE OF BATTERY POWER SUPPLY. | | | | | | |
| SYSTEM EFFECT-OPERATION DOES NOT START. | | | | | | |
| VEHICLE EFFECT-COMPOSITE DELAYED. | | | | | | |
| CORRECTIVE ACTION-NOT KNOWN-AN ASSUMPTION CAN BE MADE THAT THE BATTERY WAS REPLACED SINCE DATA SHEET GIVE EVIDENCE OF ADDITIONAL TESTING. | | | | | | |
| ELECTRICAL-A/G POWER SOURCE | F742289/P-11NH-01-10 BATTERY-RSC SET NO 2 | COMPOSITE-PROD/DP | 10A 571115 | 12/ETP NO | YES NO | |
| FAILURE MODE-FAIL TO OPERATE AT PRESCRIBED TIME. BATTERY FAILURE IN RSC SET NO. 2 RESULTED IN NO OPERATION ON INTERNAL POWER. | | | | | | |

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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP TIME | PR1 DIP OTH | VENDOR NAME VENDOR PART NO | |
|--------------------------------|--|--------------------------------|--------------------------|-----------------|-------------------------------|--------|
| | SYSTEM EFFECT-OPERATION DOES NOT START. SYSTEM FAILED TO OPERATE ON INTERNAL POWER. | | | | | 092360 |
| | VEHICLE EFFECT-NONE. | | | | | |
| | CORRECTIVE ACTION-REPLACED BATTERY AFTER TEST AND SATISFACTORILY CHECKED SYSTEM ON INTERNAL AND EXTERNAL POWER. | | | | | |
| ELECTRICAL-A/B POWER SOURCE | EN-8961A,113-D8-02 INVERTER | CAPTIVE | 2A 371006 | 1A YES NO | | 090324 |
| | FAILURE MODE - OUT OF TOLERANCE. THE INVERTERS OUTPUT WAS UNBALANCED. PHASES A AND C EXCEEDED SPECIFICATIONS. THE MEASUREMENTS WERE, PHASE A-118VAC, PHASE B-118VAC AND PHASE C-113VAC. THE PHASE A SPECIFICATION WAS 115 PLUS OR MINUS 1-2VAC. PHASE B AND C ARE REQUIRED TO OPERATE WITHIN 2 PERCENT OF PHASE A. | | | | | |
| | SYSTEM EFFECT-NONE. | | | | | |
| | VEHICLE EFFECT-NONE. | | | | | |
| | CORRECTIVE ACTION-UNKNOWN. | | | | | |
| ELECTRICAL-A/B POWER SOURCE | EN-8961A,113-D8-02 INVERTER | CAPTIVE | 2A 371006 | 1A YES NO | | 090325 |
| | FAILURE MODE-OUT OF TOLERANCE. INSTRUMENTATION OF THE INVERTER WAVEFORM SHOWED FIFTH HARMONIC DISTORTION OF ABOUT 10 PERCENT. IT IS UNCERTAIN AS TO WHETHER THE CAUSE WAS WITHIN THE ELECTRICAL SYSTEM (INVERTER OR USER SYSTEM) OR A RESULT OF INSTRUMENTATION PICK-UP. SPECIFICATION IS 0.3 PERCENT MAXIMUM. | | | | | |
| | SYSTEM EFFECT-IMPROPER ANALOG SIGNAL. | | | | | |
| | VEHICLE EFFECT-NONE. | | | | | |
| | CORRECTIVE ACTION-UNKNOWN. | | | | | |
| ELECTRICAL-A/B POWER SOURCE | EN-8871-A, 113-D8-02 INVERTER | CAPTIVE | 2A 370927 | 1-A NO NO | | 090311 |
| | FAILURE MODE-FAIL DURING OPERATION. THE WAVE FORM OF THE INVERTER VOLTAGE SHOWS DISTORTION OF 12.8 PERCENT. | | | | | |
| | SYSTEM EFFECT-IMPROPER ANALOG SIGNALS. THE INVERTER WAVE FORM IS SATISFACTORY WHEN OPERATING INTO A DUMMY LOAD, BUT APPEARS DISTORTED WHEN GENERAL ELECTRIC EQUIPMENT IS TURNED ON. | | | | | |
| | VEHICLE EFFECT-NONE. | | | | | |
| | CORRECTIVE ACTION-UNKNOWN. | | | | | |

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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|---|--------------------------------|---------------------|--------------------|------------|-------------------------------|--------|
| ELECTRICAL-A/B POWER SOURCE | EM-346/1A-104-D3-02A BATTERY, RBC | CAPTIVE | 2A 570709 | 1A 7. | YES NO | | 000309 |
| FAILURE MODE-FAILED DURING OPERATION. SET 2 FAILED AT 7 SECONDS WHEN PLATE VOLTAGE AND ASC LEVEL DROPPED TO ZERO DUE TO WEAR OR DEAD BATTERY PACK. | | | | | | | |
| SYSTEM EFFECT-LOSS OF REDUNDANCY ALSO IMPROPER OPERATION OF R8 BEACON. | | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | | |
| CORRECTIVE ACTION-REPLACED BATTERY. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | EM-314/31-111-D7-03 INVERTER | CAPTIVE | 3A 570699 | 3-1 | YES NO | | 000619 |
| FAILURE MODE-OUT OF TOLERANCE. A REQUIREMENT OF 1.5 PCT. (1.7 VAC) WAS REQUIRED BY THE RBC SYSTEM. THE INVERTER VARIED BETWEEN 0.9 PCT LOW AND 1.8 PCT LOW. | | | | | | | |
| SYSTEM EFFECT-IMPROPER ANALOG SIGNALS. THE PROPER VOLTAGE WAS NOT SUPPLIED TO VARIOUS SYSTEMS. | | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | EM-4669-11107-3 BATTERY, RBC | CAPTIVE | 2A 570525 | BYCAMORE 123.94 | YES NO | | 002147 |
| FAILURE MODE-OUT OF TOLERANCE. A LOW BATTERY VOLTAGE PREVENTED ACTUATION OF THE DESTRUCTOR RELAYS. | | | | | | | |
| SYSTEM EFFECT-IMPROPER DISCRETE SIGNALS. THE LOW VOLTAGE INDUCED CHATTERING OF THE RELAYS WHICH IN TURN PREVENTED THE DESTRUCTOR FUSES FROM FIRING. | | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | | |
| CORRECTIVE ACTION-TEMPERATURE MEASUREMENTS ARE PLANNED FOR THE NEXT RUN TO INVESTIGATE THE COLD LOX AFFECT ON THE BATTERIES. | | | | | | | |
| ELECTRICAL-A/B POWER SOURCE | A-49-14-223-P INVERTER | FAR 27-06178-3 | 147-P | FACTORY | NO NO | 11ELAND MSE-106-10 | 003016 |
| FAILURE MODE-OUT OF TOLERANCE. OUTPUT VOLTAGE VARIED ERRATICALLY. FAILURE NOT CONFIRMED DURING EXTENSIVE TEST. | | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | | |

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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|---|--------------------------------|----------------------|------------------|--------------------|-------------------------------|--------|
| ELECTRICAL-A/B POWER SOURCE | A-2P-14-131-F INVERTER-ELECTRICAL MAIN MISSILE | FAR 27-08179-3 | PLATTSDU RCH | NO NO | | LELAND MGE-100-15 | 994888 |
| FAILURE MODE-REPORTED OUT OF TOLERANCE WITH RESPECT TO FREQUENCY. FAILURE NOT CONFIRMED BY TESTS. ATTEMPT TO ADJUST IN FIELD USING MAPCHE WITHOUT NOISE FILTER RESULTED IN ERRONEOUS FREQUENCY SETTING. | | | | | | | |
| CORRECTIVE ACTION-ECP 8041 PROVIDED NOISE FILTERS FOR MAPCHE TRAILERS OF THE E AND F SERIES CONFIGURATIONS. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | ETR-015/14-510-1J-SE CONNECTOR | CAPTIVE | 1-4 E SE ETR RIES | YES NO | | | 999369 |
| FAILURE MODE-ELECTRICAL-SHORT - LOOSE CONNECTION AT MANOMETER BOX CAUSED THE EDO SIGNAL TO CANCEL THE VALVE PROGRAMMER SIGNAL. | | | | | | | |
| SYSTEM EFFECT-IMPROPER ANALOG SIGNAL. PLANNED PU VALVE RESPONSE WAS NOT ACHIEVED. | | | | | | | |
| VEHICLE EFFECT-NONE. PROPULSION CUTOFF | | | | | | | |
| CORRECTIVE ACTION-NONE. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | CT-11-20-048 HARNES | FAP 55-64508-843 | 194D 660317 | FACTORY NO | | | 990432 |
| FAILURE MODE-ELECTRICAL OPEN. DURING PROCEDURE AY65-0534-003-13 AT THE COMBINED SYSTEM TEST STAND, NO CURRENT VOLTA GE COULD BE OBSERVED AT THE PIN 6 TEST POINT OF A SANDWICH BOX. | | | | | | | |
| CORRECTIVE ACTION-NOT A CONFIRMED FAILURE. NO CORRECTIVE ACTION TAKEN OTHER THAN TO ADVISE SITE AND FACTORY PERSONNEL TO TAKE MORE CAUTION IN CHECKING CIRCUITRY. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 27C4345 PLUG, ELECTRICAL UNIBLOCK | UTP-PRT 27-04999-71 | 660406 | | YES 017069-1239 | CANNON ELEC | 990223 |
| FAILURE MODE-FOLLOWING TEMPERATURE VIBRATION TEST VOLTAGE DROP WITH 20 AMPS ACROSS CONTACT 112 WAS 96VDC MAX ALLOWABLE 90VDC INTERNAL SIDE OF CONTACT WAS DARK IN COLOR. | | | | | | | |
| CORRECTIVE ACTION-ALL PRODUCTION AND INSPECTION PERSONNEL ARE TO ASSURE THAT ALL PRODUCTION AND INSPECTION REQUIREMENTS ARE COMPLIED WITH. | | | | | | | |

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|---|---|--------------------------------|---------------------|------------------|------------|-------------------------------|
| ELECTRICAL-A/B POWER DISTRIBUTION | 27C4341 PLUG, ELECTRICAL UMBILICAL | UTP-PRT 27-04986-63 | 680403 | | YES | CANNON ELEC 017069-1242 |
| FAILURE MODE-FOLLOWING RANDOM VIBRATION IN Y AXIS THE INSULATION RESISTANCE BETWEEN PIN 108 AND SHELL WAS 9 MEGOHMS MIN RES. RED 13 1000 MEGOHMS FOLLOWING RANDOM VIBRATION IN X AXIS RESISTANCE WAS 790 MEGOHMS FOLLOWING VIB 2 AXIS R RESISTANCE WAS WITHIN TOLERANCE. | | | | | | |
| CORRECTIVE ACTION-PRODUCTION AND INSPECTION PERSONEL TO ASSURE THAT ALL PRODUCTION AND INSPECTION REQUIREMENTS ARE COMPLIED WITH. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 27C4345 PLUG, ELECTRICAL UMBILICAL | UTP-PRT 27-04986-71 | 680329 | | YES | CANNON ELEC 017069-1239 |
| FAILURE MODE-DURING PROOF CYCLE FOLLOWING RAIN TEST 8 INSULATION RESISTANCE MEASUREMENTS WERE BELOW MINIMUM OF 1000 MEGOHMS AFTER SPECIMEN HAD DRIED FOR 3 DAYS ALL MEASUREMENTS WERE WITHIN TOLERANCE. | | | | | | |
| CORRECTIVE ACTION-PRODUCTION AND INSPECTION PERSONEL ARE TO ASSURE THAT ALL PRODUCTION AND INSPECTION REQUIREMENTS ARE COMPLIED WITH. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 27F4808 PLUG, ELECTRICAL UMBILICAL | UTP-PRT 27-07986-7 | 680322 | | YES | CANNON ELEC 017069-1244 |
| FAILURE MODE-AT COMPLETION OF VIBRATION Y AXIS EXAMINATION REVEALED DENT ON END OF PIN 136. DURING X AXIS VIBRATION PIN CIRCUIT 83 INDICATED MOMENTARY OPEN DURING 2 AXIS VIBRATION 160 F PIN CIRCUIT 109 INDICATED INTERMITTENT OPEN D DURING SECOND AND THIRD RANDOM BURST. INSPECTION REVEALED MISALIGNED CONTACT, INADEQUATE TERMINATION INADEQUATE POTTING APPLICATION. SEE FAILURE OF PN 27-07987-3 OF SAME DATE AND TEST FOR RELATED REPELABLE DATA. | | | | | | |
| CORRECTIVE ACTION-PRODUCTION AND INSPECTION PERSONEL TO ASSURE ALL MANUFACTURING AND INSPECTION PROCEDURES ARE COMPLIED WITH, REF CLOSE-OUT OF RAR 81V-99-40-3822. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 27F4806 RECEPTACLE, ELECTRICAL UMBILICAL | UTP-PRT 27-07987-3 | 680322 | | YES | CANNON ELEC 017070-1244 |
| FAILURE MODE-AT COMPLETION OF VIBRATION Y AXIS EXAMINATION REVEALED SOCKET 136 RECESSED. DURING X AXIS VIBRATION CIRCUIT 83 INDICATED MOMENTARY OPEN DURING 2 AXIS VIBRATION 160 F CIRCUIT 109 INDICATED INTERMITTENT OPEN DURING SECOND AND THIRD RANDOM BURST. INSPECTION REVEALED MISALIGNED CONTACT, INADEQUATE TERMINATION, INADEQUATE. SEE FAILURE OF PN 27-07986-7 OF SAME DATE AND TEST FOR RELATED PLUS DATA. | | | | | | |

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|--------------------------------------|---|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| | CORRECTIVE ACTION-PRODUCTION AND INSPECTION PERSONNEL TO ASSURE THAT ALL PRODUCTION AND INSPECTION PROCEDURES ARE COMPLIED WITH. REF CLOSE-OUT OF RAR 8LV-99-40-3822. | | | | | | 890229 |
| ELECTRICAL-A/B POWER DISTRIBUTION | 8LV-9D-24-3000P CONNECTOR ELECTRICAL. | FAR 81-59900-638 | 7118 680317 | WTR | | CANNON 6452RT08-451 1 | 890440 |
| | FAILURE MODE-ELECTRICAL SHORT CIRCUIT. FAILURE WAS ATTRIBUTED TO SHORT CIRCUITING CAUSED BY CONTAMINATION AT MATING SURFACE OF CONNECTOR PRESUMABLY DISLODGED AND LOST WHEN THE CONNECTOR WAS UNMATED. | | | | | | |
| | CORRECTIVE ACTION-INFORMING SITE PERSONNEL OF THE PROBABLE CAUSE AND ADVISING THEM TO MAKE CLOSER INSPECTION OF CONNECTOR MATINGS. | | | | | | 890237 |
| ELECTRICAL-A/B POWER DISTRIBUTION | 27C4542 RECEPTACLE, ELECTRICAL UNBILICAL | UTP-PRT 27-04999-13 | 880308 | | YES | CANNON ELEC 017070-1040 | |
| | FAILURE MODE-WHEN HARNESS WAS FLEXED NEAR RECEPTACLE VOLTAGE DROP ACROSS PIN 71 VARIED BETWEEN 30 MV DC AND 120 MV DC. INSPECTION REVEALED EXCESSIVE USE OF ADHESIVE DISTORTED CONTACT BUSHING INADEQUATE SOLDER TERMINATIONS DISTENDED SOCKET CONTACTS INADEQUATE POTTING. | | | | | | |
| | CORRECTIVE ACTION-PRODUCTION AND INSPECTION PERSONNEL TO ASSURE THAT ALL MANUFACTURING AND INSPECTION PROCEDURES ARE COMPLIED WITH. REF CLOSE OUT OF RAR 8LV-99-40-3822. | | | | | | 890238 |
| ELECTRICAL-A/B POWER DISTRIBUTION | 69C4287-2 CONTROL UNIT AS/ OAO | UTP-QUAL/PPY 09-61120-5 | 890221 | | YES | GO/C 89-61120-5 | |
| | FAILURE MODE-SPECIMEN DID NOT MEET THE CONDUCTED AND RADIATED INTERFERENCE REQUIREMENTS OF MIL-1-26800. | | | | | | |
| | CORRECTIVE ACTION-ECP 3214 WAS APPROVED WHICH INCLUDED AN EMI DEVIATION TO THE SPEC. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 27C4543-1 PLUG, ELECTRICAL UNBILICAL | UTP-PRT 27-04999-69 | 680111 | | YES | CANNON ELEC 017089-1241 | 890243 |
| | FAILURE MODE-DURING EXAMINATION OF PRODUCT PRIOR TO STARTING TEST IT WAS FOUND THAT THE PIN WHICH SECURES THE RING + SLEEVE TO THE LOCK ASSEMBLY HAD BEEN BENT AND COULD NOT BE REMOVED WITHOUT APPLYING EXCESSIVE FORCE. | | | | | | |
| | CORRECTIVE ACTION-NO DESIGN CORRECTION. IT WAS DETERMINED THAT THE PLUG HAD BEEN DROPPED PRIOR TO TEST. | | | | | | |

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|---|--|--------------------------------|---------------------|------------------|------------|-------------------------------|
| ELECTRICAL-A/B POWER DISTRIBUTION | SLV-9D-20-3082-F PROBE - 100 PERCENT LOG | FAR 69-43228-3 | 680107 | WTR | YES NO | 690351 69-43228-3 |
| FAILURE MODE-ELECTRICAL OPEN. DURING PROPELLANT LEVEL CHECKOUT, 100 PERCENT LEVEL A-SECTION FAILED WET INDICATING A N OPEN CIRCUIT. INVESTIGATION REVEALED THE PLATINUM ELEMENT OF THE A-SECTION HAD BEEN VAPORIZED APPARENTLY WHEN 115 VOLT 60 CYCLE AC POWER WAS APPLIED ACROSS THE ELEMENT. REF FAR SLV-9D-20-3036-F. | | | | | | |
| CORRECTIVE ACTION-CIC 26536-553-1 WAS ISSUED 65125. THIS REMOVED THE TWO WIRES WHICH SUPPLIED THE 115 VOLT 60 CYCLE AC POWER TO THE 100 PERCENT SECTION OF THE STILLWELL ASSEMBLY. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 99C4382-2 CONTROL UNIT ASSEMBLY-OAC | UTP-ET7 69-61120-3 | 651215 | 60/C | YES NO | 690359 YES 60/C NO |
| FAILURE MODE-OUT OF SPECIFICATION OR TOLERANCE- DURING THE FINAL SATISFACTORY PERFORMANCE TEST OUT OF TOLERANCE RESISTANCE MEASUREMENT WAS RELOADED FROM J1F TO J7B WAS 1.91 MEG OHMS (SHOULD BE 1.80 MEG OHMS AND FROM J5A TO J7A WAS 2.38 MEG OHMS (SHOULD BE 2.20 MEG OHMS). ENVIRONMENTAL TESTING CAUSED THE RESISTANCE VALUE TO SHIFT. | | | | | | |
| CORRECTIVE ACTION-NONE-THE RESISTANCE SHIFT IS WELL WITHIN THE SHIFT ALLOWED P. MIL-R-15, SECTION 3. THESE RESISTORS ARE USED IN A NON CRITICAL APPLICATION. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | PTAB599/PBA-MO-01-OAC7 ELECTRICAL PLUG | COMPOSITE-FRD/DPL | 1740 651210 | ETR | YES NO | 690372 |
| FAILURE MODE-FAIL DURING OPERATION. AT SECURING OF ATLAS LOX TANKING THE PNEUMATICS INTERNAL PERMIT SWITCH WAS ACTIVATED. UPON ACTIVATION OF THIS SWITCH, THE ATLAS LOX PLCU INDICATOR LIGHT EXTINGUISHED. INVESTIGATION REVEALED A FAULTY PLUG. | | | | | | |
| SYSTEM EFFECT-NONE. VEHICLE EFFECT-NONE. | | | | | | |
| CORRECTIVE ACTION-PLUG WAS 1RD AND WAS REPLACED. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | SLV-9D-14-243P ELECTRICAL FILTER ASSEMBLY | FAR 69-91075 | 651209 | FACTORY | YES NO | 690372 YES 60/C NO |
| FAILURE MODE-ERRATIC OPERATION. POOR ATTENUATION WAS RESULTING FROM WIRING GEOMETRY AND LEAD LENGTHS. POOR BONDING PRACTICES WERE OBSERVED. | | | | | | |
| CORRECTIVE ACTION-FAR SLV-9D-14-243P RECOMMENDING DESIGN CHANGES AND QUALITY CONTROL STRICT ADHERENCE TO DRAWING RE | | | | | | |

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|---|---|--------------------------------|---------------------|------------------|------------|--------------------------------|--------|
| GUIDELINES. SURVEY REMOVAL OF ALL SUBJECT PARTS FROM MISSILE SERVICE. | | | | | | | 992876 |
| ELECTRICAL-A/B POWER DISTRIBUTION | SLV-99-14-247-F RELAY | FAR MS24141-D2 | 931207 | FACTORY | YES | CUTLER-HAMMER NO MS24141-D2 | 990341 |
| FAILURE MODE-FAIL TO OPERATE AT PRESCRIBED TIME. UNIT REPORTEDLY FAILED DURING OPERATION PER EOP 325-37.2. THE NORMALLY-OPEN CONTACT OPENED, ALTHOUGH POWER WAS BEING APPLIED TO THE RELAY. | | | | | | | |
| CORRECTIVE ACTION-FAILURE WAS NOT CONFIRMED. THE RELAY IS BEING REPLACED WITH A DIFFERENT PART, NO ADDITIONAL CORRECTIVE ACTION WAS RECOMMENDED. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | FAR SLV-99-14-247-F RELAY | FAR | 931207 | FACTORY | | CUTLER HAMMER MS24141-D2 | 990427 |
| FAILURE MODE-ERRATIC OPERATION. NORMALLY OPEN CONTACTS REPORTEDLY OPENED WITH POWER ON RELAY. | | | | | | | |
| CORRECTIVE ACTION-NONE. FAILURE WAS UNCONFIRMED. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 69C4382.1 CONTROL UNIT ASSEMBLY-OAO | UTP-PRT 69-81120-3 | 651201 | 60/C | YES | 60/C NO | 990248 |
| FAILURE MODE-OUT OF SPECIFICATION OR TOLERANCE-DURING PROOF CYCLE FOLLOWING EXAMINATION OF PRODUCT AND VIBRATION TESTING OUT OF TOLERANCE RESISTANCE MEASUREMENTS WERE RECORDED. AS HIGH AS 2.4 MEGOHMS. REQUIRED VALVE IS 2-8 MEGOHMS. ENVIRONMENTAL TESTING CAUSED THE RESISTANCE VALUE TO SHIFT. | | | | | | | |
| CORRECTIVE ACTION-NONE-THE RESISTANCE SHIFT IS WELL WITHIN THE SHIFT ALLOWED BY MIL-R-11, SECTION 3. THE RESISTANCE VALVE IS NOT CRITICAL TO THE SYSTEM APPLICATION. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 69C4382.1 CONTROL UNIT ASSEMBLY-OAO | UTP-SLT 69-81120-3 | 651130 | 60/C | YES | 60/C NO | 990249 |
| FAILURE MODE-PREATURE OPERATION-DURING RANDOM VIBRATION TEST THE NORMALLY OPEN RELAY CONTACTS INDICATED INTERMITTENT OPENS. CAUSE ATTRIBUTED TO EXCESSIVELY HIGH INPUT VIBRATION LEVELS (8LT). | | | | | | | |
| CORRECTIVE ACTION-NONE. THE ANOMALY WAS EXAMINED AND CONSIDERED OF NO CONSEQUENCE SINCE THE PART WAS TESTED ABOVE DESIGN SPECIFICATIONS AND THE FACT THAT THE PART SUCCESSFULLY PASSED PRT. | | | | | | | |

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| ELECTRICAL-A/B POWER DISTRIBUTION | 89C4382-1 CONTROL UNIT ASSEMBLY-OAO | UTP-BLT 89-61120-3 | 851117 | | YES | 60/C |
| FAILURE MODE-INTERMITTENT OPEN CIRCUIT FROM J5N TO J4A AFTER BLT VIBRATION. CONDITION APPEARED TO BE BETWEEN J5N AND D TERMINAL 14 OF RELAY K1 BUT DISAPPEARED AND COULD NOT BE DUPLICATED. | | | | | | |
| CORRECTIVE ACTION-NO CORRECTIVE ACTION TAKEN BECAUSE FAILURE COULD NOT BE VERIFIED. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 89C4382-1 CONTROL UNIT ASSEMBLY-OAO | UTP-BLT 89-61120-3 | 851117 | 60/C | YES | 60/C NO |
| FAILURE MODE-ERRATIC OPERATION-INTERMITTENT OPEN CIRCUIT FROM PIN J5N TO PIN J4A WAS DISCOVERED DURING BLT POST VIB RATION TEST BY SHAKING THE SPECIMEN. THE OPEN CIRCUIT WAS ISOLATED BETWEEN RELAY K1 TERMINAL 14 AND PIN J5N. EXACT C AUSE COULD NOT BE DETERMINED AFTER EXTENSIVE INVESTIGATION. | | | | | | |
| CORRECTIVE ACTION-NONE-THIS ANOMALY WOULD NOT HAVE CAUSED A FAILURE IN FLIGHT. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 89C4382-1 CONTROL UNIT ASSEMBLY-OAO | UTP-ETI 89-61120-3 | 851115 | | YES | 60/C |
| FAILURE MODE-THREE DIMENSIONAL OUT-OF-TOLERANCE MEASUREMENTS FOUND ON ONE SPECIMEN AND ONE ON THE OTHER. | | | | | | |
| CORRECTIVE ACTION-THIS DIMENSIONAL OUT-OF-TOLERANCE CONDITION WOULD NOT AFFECT PERFORMANCE. QUALITY CONTROL DIRECTE D TO TAKE ACTION TO ASSURE THAT THIS CONDITION DOES NOT REOCCUR. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 89C4382-1 HARNES CONNECTOR | FAR 89-43220-3 | 7120 851112 | FACTORY | YES | 60/C NO 89-43220-3 |
| FAILURE MODE-ELECTRICAL OPEN. THE STILLWELL HARNES CONNECTOR WAS OPEN CIRCUITED DUE TO AN OVER-SIZED FEMALE PIN 11 - THE OTHER 12 PINS IN THE HARNES CONNECTOR WERE OUT OF TOLERANCE. THE OPEN WAS FOUND BETWEEN PINS 5 AND 11. A CHEC K OF THE PRODUCTION AREA REVEALED OVERSIZED MALE PINS WERE USED TO TEST THE STILLWELL ASSEMBLY. THIS CONDITION CAUSE D SPREADING OF THE SLOTTED FEMALE PINS. | | | | | | |
| CORRECTIVE ACTION-REQUESTED THAT THE TESTING FIXTURES BE CHECKED TO PRECLUDE THE USE OF OVERSIZED MALE PINS IN TEST ING THE STILLWELL ASSEMBLIES. (REF PAR 89V-20-3000). | | | | | | |

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|--|---|--------------------------------|--------------------------|------------------|------------|-------------------------------|--------|
| SUB-SYSTEM | | | | | | | 890320 |
| ELECTRICAL-A/B POWER DISTRIBUTION | A1-4ND-08-200 CIRCUITBREAKER | COMPOSITE-PRD/DPL | 2000 851112 | A1 | NO NO | | |
| FAILURE MODE-FAIL DURING OPERATION. AT COMMIT STOP A 120 VDC FAULT WAS APPARENT ON THE LAUNCH ANALYST PANEL. INVESTIGATION REVEALED THAT A CIRCUIT BREAKER HAD TRIPPED. THE CAUSE OF THE FAULT IS UNKNOWN. | | | | | | | |
| SYSTEM EFFECT-UNKNOWN. | | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | | |
| CORRECTIVE ACTION-THE CIRCUIT BREAKER WAS RE-SET. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 69C4675 FILTER ASSEMBLY ELECTRICAL | UTP-QUAL/PPT 69-61075-1 | 651103 | 60/C | YES | NO 60/C | 890285 |
| FAILURE MODE-FILTER TESTED LESS THAN 40 DB OF ATTENUATION FOR FREQUENCIES GREATER THAN 50 MC. DURING EMJ TEST | | | | | | | |
| CORRECTIVE ACTION-ISOMETRIC DRAWING CREATED TO CONTROL THE INTERNAL HARNESS GEOMETRY. EXISTING HARDWARE SURVEYED AND NEW HARDWARE WIRED PER NEW ISOMETRIC DRAWING. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 69C4675 FILTER ASSEMBLY ELECTRICAL | UTP-QUAL/PPT 69-61075-1 | 651021 | | YES 60/C | 69-61075-1 | 890293 |
| FAILURE MODE-DIMENSIONS OUT-OF-TOLERANCE Z AXIS VIEW SPEC 4.38 +OR- 0.03 ACTUAL 4.425 SPEC 0.80 +OR- 0.03 ACTUAL 0.760 SPEC 0.50 +OR- 0.03 ACTUAL 0.860. | | | | | | | |
| CORRECTIVE ACTION-THESE DIMENSIONAL OUT-OF-TOLERANCE CONDITIONS WOULD NOT AFFECT PERFORMANCE QUALITY CONTROL DIRECTED TO TAKE CORRECTIVE ACTION TO ASSURE THAT THE CONDITION DOES NOT REOCCUR. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 69C4675 FILTER ASSEMBLY ELECTRICAL | UTP-QUAL/PPT 69-61075-1 | 651021 | 60/C | YES 60/C | NO | 890249 |
| FAILURE MODE-WIRING OF J1A AND J1C WERE REVERSED WITH RESPECT TO THE DRAWING. | | | | | | | |
| CORRECTIVE ACTION-QUALITY ASSURANCE AND QUALITY CONTROL DIRECTIVES ISSUED TO ASSURE THAT THIS TYPE DISCREPANCY DOES NOT REOCCUR. | | | | | | | |

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|--|---|--------------------------------|---------------------|------------------|---------------------------|-------------------------------|---------|
| ELECTRICAL-A/B POWER DISTRIBUTION | 89C4382 CONTROL BOX-PYROTECHNIC-OAO | UTP-PRT 89-81120-3 | 851014 | 50/C | YES 60/C NO | | 8902393 |
| FAILURE MODE-OUT OF TOLERANCE. DURING EXAMINATION OF PRODUCT, THE DIMENSIONS LOCATING TWO OF THE CONNECTOR HOLE CUT OUTS AND MOUNTING HOLE PATTERN WERE OUT OF TOLERANCE. | | | | | | | |
| CORRECTIVE ACTION-BOTH QUALITY ASSURANCE AND INSPECTION WERE INSTRUCTED TO TAKE APPROPRIATE ACTION TO PREVENT RECUR ENCE OF THIS PROBLEM. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 89C4382 CONTROL UNIT ASSEMBLY-OAO | UTP-SLT 89-81123-3 | 851014 | | YES 60/C | | 8902394 |
| FAILURE MODE-THREE DIMENSIONAL OUT-OF-TOLERANCE MEASUREMENTS FOUND ON ONE SPECIMEN AND TWO FOUND ON ANOTHER. | | | | | | | |
| CORRECTIVE ACTION-THIS DIMENSIONAL OUT-OF-TOLERANCE CONDITION WOULD NOT AFFECT PERFORMANCE QUALITY CONTROL DIRECTED TO TAKE ACTION TO ASSURE THAT THIS CONDITION DOES NOT REOCCUR. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | SLV-99-20-3058-F PROBE 100 PERCENT LOE | FAR 89-43228-3 | 851007 | FACTORY | YES 60/C NO 89-43228-3 | | 8902398 |
| FAILURE MODE-ELECTRICAL OPEN. RESISTANCE CHECK OF THE A-SECTION OF THE 100 PERCENT LEVEL TRANSDUCER INDICATED AN OP EN CIRCUIT. INVESTIGATION DISCLOSED FAILURE OF THE ASSEMBLY WAS DUE TO A VAPORIZED 100 PERCENT A-SECTION PLATINUM EL EMENT DUE TO APPLICATION OF 115 VOLT 60 CYCLE POWER DIRECTLY ACROSS THE ELEMENT. THIS CONDITION EXISTED DUE TO A WIR ING ERROR IN THE SUSTAINER AND VERNIER PROXIMITY ELECTRICAL CHECKOUT PANEL. | | | | | | | |
| CORRECTIVE ACTION-DESIGN GROUP REQUESTED TO REVIEW DESIGN OF ELECTRICAL CHECKOUT PANEL AND MAKE CHANGES TO ELIMINAT E THE CONDITIONS RESPONSIBLE FOR THE FAILURE OF SEVEN STILLWELL ASSEMBLIES. IN RESPONSE CIC 28338-353-1 WAS ISSUED. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | SLV-19-14-243P HARNES | FAR 89-42302-1 | 951009 | FACTORY | YES 60/C NO | | 890280 |
| FAILURE MODE-ELECTRICAL OPEN CIRCUIT BETWEEN PINS (A) AND (B) FROM IMPROPER INTERNAL CONNECTIONS. | | | | | | | |
| CORRECTIVE ACTION-FAR SLV-99-14-3878 REQUESTING THE REVIEW OF PLANNING CARD WIRING TECHNIQUES, AND IN PROCESS INSPE CTION. | | | | | | | |

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|---|---|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| ELECTRICAL-A/B POWER DISTRIBUTION | 99C4347.1 CONTROL BOX-PYROTECHNIC | UTP-QUAL/PPT 69-81070-1 | 650917 | 60/C | YES NO | YES 60/C NO | 992306 |
| FAILURE MODE-OUT OF SPECIFICATION. DURING ENI TESTING BOTH THE CONDUCTED AND RADIATED INTERFERENCE OVER THE ENTIRE FREQUENCY RANGE OF 0.15 MC TO 25.0 MC EXCEEDED MIL-I-20600 SPECIFICATION. | | | | | | | |
| CORRECTIVE ACTION-REQUEST FOR ENI DEVIATION AGAINST MIL-I-20600 IS BEING PREPARED FOR CUSTOMER SUBMITTAL. (REF. ECP 7000-87.) | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | SLV-A9-24-5030 HARNESS | FAR 81-55900-839 | 650910 | FACTORY | YES NO | YES CANNON NO KPT6F8-4811 | 992716 |
| FAILURE MODE-SHORT (ELECTRICAL). DURING FACTORY ELECTRICAL TESTS A CONNECTOR PLUG WAS FOUND TO HAVE ALL THREE WIRES SHORTED TOGETHER DUE TO EXCESSIVE TIGHTENING OF THE CONNECTOR BACKSHELL BECAUSE OF INCORPORATION OF PLASTIC FERRULES BY VENDOR INSTEAD OF ALUMINUM-ALLOY FERRULES WHICH LIMIT THE AMOUNT OF TIGHTENING. | | | | | | | |
| CORRECTIVE ACTION-PLASTIC FERRULE TYPE CONNECTORS WERE DECLARED INACTIVE FOR DESIGN IN POTTED APPLICATIONS. DESIGN ACTION REQUESTED TO PUT EPOXY ON ALL BACKSHELLS TO PREVENT MOVEMENT OF BACKSHELLS AFTER ASSEMBLY OF HARNESS. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | SLV-99-14-241P PYROTECHNIC CONTROL UNIT ASSEMBLY | FAR 69-81180-3 | 650900 | FACTORY | YES NO | YES 60/C NO | 993027 |
| FAILURE MODE-OUT OF SPECIFICATION. DURING PRT TESTING UNIT WAS OUT OF SPECIFICATION. | | | | | | | |
| CORRECTIVE ACTION-HAR SLV-99-14-3874 RECOMMENDING REVISION OF SPECIFICATION. REDESIGN AND IMPROVED MANUFACTURING QUALITY CONTROL. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 99C4287.1 CONTROL BOX PYROTECHNIC QAO | UTP-QUAL/PPT 69-81120-3 | 650830 | 60/C | NO NO | NO 60/C NO | 991876 |
| FAILURE MODE-OUT OF SPECIFICATION. DURING EACH PROOF CYCLE, A OR B OF THE PRT, THE TOTAL OUTPUT CURRENT WAS LESS THAN 360 AMPS ALTHOUGH THE INPUT VOLTAGE FROM J2A PLUS TO J2C MINUS WAS ALWAYS 17.5 PLUS OR MINUS 1.5 VDC AND EACH LUNA D RESISTANCE WAS 2.03 PLUS OR MINUS 0.10 OHMS. THE REQUIREMENT IS TO DELIVER 380 AMPS TO 28 EXTERNAL RESISTIVE LOADS DRAWING 7 (PLUS) 2 (MINUS) 1 AMP EACH, WITH A 17.5 (PLUS) OR (MINUS) 1.5 VDC. | | | | | | | |
| CORRECTIVE ACTION-THE COMPONENT SPECIFICATION 69-08312 WAS REVISED TO ALLOW A WIDER TOLERANCE ON THE LOAD RESISTANCE VALUES SO THAT THEY MAY BE ADJUSTED TO DRAW THE REQUIRED 7 (PLUS) 2 (MINUS) 1 AMPERES. THIS DISCREPANCY IS OF THE TEST SETUP REQUIREMENTS AND NOT THE TEST SPECIMEN. | | | | | | | |

13 JUN 1966

GENERAL UNICS
CONVAIR J1310

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF TIME DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO |
|--|---|--------------------------------|------------------------------|------------------|------------|-------------------------------|
| ELECTRICAL-A/B POWER DISTRIBUTION | 69C4287.1 CONTROL BOX PYROTECHNIC QAO | 69-61120-3 | 830827 | 50/C | NO | 50/C NO |
| <p>FAILURE MODE-OUT OF SPECIFICATION. DURING ENI TESTING PER MIL-I-26600 BOTH THE CONDUCTED AND RADIATED BROADBAND AND PULSE CM INTERFERENCES OVER THE MAJORITY OF THE FREQUENCIES TESTED, THE WORST CASE BEING 32DB ABOVE SPEC. AT 8 MEGA HERTZ FOR CONDUCTED, AND 27DB ABOVE SPEC. AT 10 AND 40 MEGAHERTZ FOR RADIATED.</p> <p>CORRECTIVE ACTION-SINCE THE INTERFERENCE GENERATED IS OF SHORT DURATION (LESS THAN 0.5 SEC.) AND OCCURS ONLY ONCE PER NORMAL OPERATION PERIOD, CONVAIR REQUESTED OF NASA TO AUTHORIZE A DEVIATION AGAINST MIL-I-26600 (PARA. 3.1.2 SHORT DURATION INTERFERENCE) TO ALLOW FOR THESE OUT OF TOLERANCES. (REF. CONTRACTUAL LTR 645-2-328).</p> | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | SLV-90-14-240F HARNESS | FAR 69-61002-901 | 7110 830825 | WTR | YES NO | CONVAIR |
| <p>FAILURE MODE-EXTERNAL SHORT. AN INTERMITTENT SHORT CIRCUIT WAS BETWEEN ELECTRICAL CONNECTOR P804, PIN B, AND GROUND. THE SHORT WAS LESS THAN ONE OHM, RESISTANCE TO GROUND.</p> <p>CORRECTIVE ACTION-THE LOW RESISTANCE OF ONE OHM WAS NOT CONFIRMED. HOWEVER THE LOW RESISTANCE PATH MEASURED 20,000 OHM. DURING SALT WATER SOLUTION TESTING AND WOULD NOT HAVE CAUSED VERNIER ENGINE TO GO HARD OVER. CORRECTIVE ACTION CONCERNING THE POTTING COMPOUND NOT ADHERING IS DOCUMENTED IN FAR SLV-90-14-3875.</p> | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 69C4287.1 CONTROL BOX PYROTECHNIC QAO | UTP-QUAL/PPT 69-61120-3 | 830819 | YES NO | 50/C | NO |
| <p>FAILURE MODE-OUT OF SPECIFICATION. FOLLOWING THE ACCELERATION TEST THE RESISTANCE FROM PIN J1P TO J4A WAS MEASURED 0.323 OHMS. /SHOULD BE LESS THAN 0.1 OHMS/ RESEARCH REVEALED THE AUXILIARY CONTACTS ON THE RELAYS ARE RATED AT 10 AMP BUT ARE BEING USED TO SWITCH COMPARATIVELY SMALL CURRENTS /500 MA. OR LESS/.</p> <p>CORRECTIVE ACTION-THE COMPONENT SPECIFICATION WAS REVISED TO ALLOW PIN TO PIN CONTINUITY OF 0.3 OHMS FOR PIN TO PIN CIRCUITS PASSING THROUGH THE AUXILIARY CONTACTS.</p> | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 69C4287.1 CONTROL BOX - PYROTECHNIC QAO | UTP-QUAL/PPT 69-61120-3 | 830813 | 50/C | YES NO | 50/C NO |
| <p>FAILURE MODE-STRUCTURAL. FOLLOWING THE 2-AXIS TEMPERATURE, ALTITUDE AND VIBRATION TEST, AN OPEN CIRCUIT WAS DISCOVERED FROM PIN J6A TO PIN J4A. INVESTIGATION REVEALED THAT THE LEAD TO RESISTOR 907 WAS BROKEN. THE FAILURE WAS DUE TO FATIGUE, WORKMANSHIP AND EXTENDED VIBRATION TIME SUSTAINED BY THE UNIT (5 VIBRATION PERIODS).</p> | | | | | | |

15 JUN 1956

GENERAL JANICS
CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO |
|--|--|--------------------------------|---------------------|------------------|------------|-------------------------------|
| CORRECTIVE ACTION-RAR 8LV-99-14-3014 WAS INITIATED TO SEEK CORRECTIVE ACTION 1.4 THE QUALITY CONTROL AREA. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 89C4287.1 CONTROL BOX-PYROTECHNIC-OMG | UTP-QUAL/PPY 31-61120-3 | 850812 | 60/C | YES | 60/C NO |
| FAILURE MODE-FAIL DURING OPERATION. DURING Z-AXIS RANDOM ONLY VIBRATION, ALTITUDE, TEMPERATURE TEST, (VIBRATION 0.3 06 SQUARE PER CPS, TEMPERATURE TO DEGREES F, ALTITUDE 1510 TO THE MINUS 4 MM HGT). THE SPECIMEN EXHIBITED MOMENTARY RELAY CONTACT CLOSURES. THE DURATION OF CLOSURES WERE LONGER THAN 10 MICRO SECONDS. THE DESIGN LEVEL VIBRATION IS NEAR THE THRESHOLD LEVEL OF SUSCEPTIBILITY TO VIBRATION OF THE RELAYS IN THE ASSEMBLY. | | | | | | |
| CORRECTIVE ACTION-CIC6531 PROVIDED FOR ADDITION OF VIBRATION ISOLATION MOUNTS TO THE CONTROL UNIT INSTALLATION. THE VIBRATION ISOLATION MOUNTS WERE INSTALLED WITH THE CONTROL UNITS USED IN THE PRT PORTION OF THE UNIFIED TEST PROGRAM. THE CONTROL UNITS SUCCESSFULLY PASSED THE PRT VIB-TEMP-ALY TEST. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 89C4347.1 CONTROL BOX - PYROTECHNIC | UTP-QUAL/PPY 89-61070-1 | 850802 | | YES | 60/C NO |
| FAILURE MODE-OPEN ELECTRICAL. DURING Y-AXIS RANDOM/SINE VIBRATION, TEMPERATURE TEST (PRT LEVEL VIBRATION, TEMPERATURE 100 DEG F). THE TEST SPECIMEN EXHIBITED RELAY CONTACT CLOSURES. INVESTIGATION REVEALED THAT A FILTER NUT BACKED OFF DURING VIBRATION AND CAUSED A INTERMITTENT OPEN CIRCUIT. | | | | | | |
| CORRECTIVE ACTION-EOM 419021 TO 60/C DRAWING 89-61070 WAS INITIATED TO CALLOUT THE NUT TORQUE VALUE SO THAT PRODUCTION INSPECTION WOULD BE ESTABLISHED. SURVEY INSTRUCTION S/N 78-65 ISSUED TO INSURE THAT ALL UNITS MANUFACTURED TO DATE ARE ADEQUATE. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 8LV-99-20-3055-F OXIDIZER-LEVEL STILLWELL ASSY. | FAR 89-43228-3 | 7115 | FACTORY | YES | 60/C NO |
| FAILURE MODE-ELECTRICAL OPEN. UNIT WAS REJECTED FOR FAILING FACTORY CONTINUITY TEST. FAILURE WAS CONFIRMED AS BEING ELECTRICALLY OPEN. ALSO 98 AND 110 PCT SENSORS WERE REVERSED. | | | | | | |
| CORRECTIVE ACTION-DETAILS OF ACCEPTANCE TEST PROCEDURE WAS REVISED TO ASSURE PROPER INSTALLATION. DRAWING WAS REVISED SO AS TO MAKE IDENTIFICATION VISABLE AFTER INSTALLATION OF SENSORS. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 8LV-99-20-3055-F PROBE 100 PERCENT LOR | FAR 89-43228-3 | 7115 | FACTORY | YES | 60/C NO 89-43228-3 |
| FAILURE MODE-ELECTRICAL OPEN. A RESISTANCE CHECK OF THE A-SECTION OF THE 100 PERCENT LEVEL TRANSDUCER INDICATED AN OPEN CIRCUIT. EXAMINATION REVEALED THE PLATINUM ELEMENT HAD BEEN DESTROYED APPARENTLY DUE TO MISAPPLICATION OF HIGH VOLTAGE BETWEEN PINS 3 AND 8 OF THE ASSEMBLY. A 100 THE 100 PERCENT LEVEL AND OVERFILL PROBES WERE REVERSED ON THE 8 | | | | | | |

GENERAL UNICS
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DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | SITE TIME | PRI OTH | VEHICLE NAME PART NO | |
|--|---|--------------------------------|---------------------|--------------|------------|-------------------------|--------|
| TILLMELL ASSEMBLY. | | | | | | | 890550 |
| CORRECTIVE ACTION-REVISED ACCEPTANCE TEST PROCEDURE AND DESIGN DRAWING TO RELOCATE PART MARK ON SENSORS FOR VISIBILITY AFTER ASSEMBLY. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | SLV-99-20-3034-F MANDREL | FAR 35-43006-3 | 850824 | FACTORY | YES NO | YES 60/C | 890570 |
| FAILURE MODE-E ELECTRICAL SHORT. DURING PRODUCTION RE-EVALUATION TESTING THE LOW MANOMETER DEVELOPED AN APPARENT DIELECTRIC SHORT. FAILURE OCCURRED WHEN MERCURY UNDER HIGH PRESSURE WAS FORCED INTO TWO SMALL HOLES IN THE DIELECTRIC COATING ON THE LOW MANOMETER. | | | | | | | |
| CORRECTIVE ACTION-NO CORRECTIVE ACTION TAKEN. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | SLV-99-20-3034-F MANDREL | FAR 35-43006-3 | 850824 | FACTORY | YES NO | YES 60C | 890549 |
| FAILURE MODE-ELECTRICAL SHORT. DURING ACCELERATION TESTING AT 5 GS THE LOW MANOMETER DEVELOPED A DIELECTRIC SHORT. MICROSCOPIC INSPECTION REVEALED TWO SMALL HOLES IN THE DIELECTRIC COATING. CONDUCTIVE IRON PARTICLES WERE FOUND EMBEDDED IN THE DIELECTRIC. | | | | | | | |
| CORRECTIVE ACTION-IMPROVEMENTS HAVE BEEN MADE IN MANDREL COATING AND INSPECTION DURING THE PAST YEAR. EVIDENCE SEEN 8 TO INDICATE THE FAILED MANOMETER HAD BEEN COATED SEVERAL YEARS AGO. THE MANOMETER WILL BE STRIPPED AND RECOATED, TESTED AND REEXAMINED FOR DIELECTRIC BREAKDOWN. RETESTING WAS SATISFACTORILY ACCOMPLISHED WITH NO DIELECTRIC BREAKDOWN. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | DRF63-044/B3-402-00-890 HARNES | COUNTDOWN | 890 850527 | B3 | YES NO | | 890488 |
| FAILURE MODE-OPEN ELECT. IN CONNECTOR OF A/P HARNES TO DECODER. GINBAL TEST RED LIGHT ON LAP. | | | | | | | |
| SYSTEM EFFECT-OPERATION DOES NOT START. NO 60 STEERING COMMANDS. | | | | | | | |
| VEHICLE EFFECT-LAUNCH COUNTDOWN ABORT AND RESCHEDULED. | | | | | | | |
| CORRECTIVE ACTION-PLUS REPLACED. | | | | | | | |

GENERAL DYNAMICS
CONVAIR DIVISION

18 JUN 1966

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | SITE TIME DIP | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|--|--------------------------------|---------------------|------------------|------------|-------------------------------|---------|
| ELECTRICAL-A/B POWER DISTRIBUTION | SLV-98-14-238F SEMICONDUCTOR DIODE | FAR 60-63112-1 | 650526 | FACTORY | YES NO | TEXAS INSTRUMENTS U-899 | 0939825 |
| FAILURE MODE-STRUCTURAL. MOUNTING STUD THREADS STRIPPED DURING TIGHTENING. | | | | | | | |
| CORRECTIVE ACTION-REDUCED STUD TORQUING REQUIREMENTS. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | LV-98-20-3049-F CAPACITOR | FAR 55-43005-13 | 184D 850511 | FACTORY | YES NO | 60/C | 0939866 |
| FAILURE MODE-SHORT-P/U SET REPORTEDLY FAILED IN FACTORY DURING FINAL CHECKOUT. FAILURE WAS CAUSED BY AN INTERMITTENT SHORT CIRCUIT IN CAPACITOR C-401 ON THE GAIN-CONTROL BOARD. SHORT CIRCUIT WAS CAUSED BY A PARTICLE COMPOSED OF GOLD AND RHODIUM EMBEDDED IN SILICON GREASE. | | | | | | | |
| CORRECTIVE ACTION-SURVEY 47-65 ISSUED TO LOCATE ALL 27-43016-31 AND 55-43005-13 P/U SETS AND RETURN TO P/U CALIBRATION LAB. FOR CALIBRATION CHECK AND CLEANING OF VARIABLE AIR CAPACITOR IN ACCORDANCE WITH MANUFACTURING INSTRUCTION 7-04340. ECP 55-330-55 AND 55-330-55.2 TO INCORPORATE A REQUIREMENT TO PERFORM MANUFACTURING INSTRUCTION 7-04340 PRIOR TO EVERY CALIBRATION OF A P/U MATCHED SET. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | LV-98-20-3052-F MANOMETER ASSY | FAR 27-43016-31 | 850425 | ETR | YES NO | 60/C | 0939866 |
| FAILURE MODE-OUT OF SPECIFICATION-P/U SET REPORTEDLY FAILED DURING LABORATORY CHECKOUT OF THE SET. THE LOW MANOMETER PRESSURE DROPPED. FAILURE WAS CAUSED BY AN OVERSIZE INSERT IN THE LOW MANOMETER. | | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. 60/C PERSONNEL WERE CAUTIONED NOT TO USE OVERSIZED INSERTS IN MANOMETERS. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | SLV-98-14-239CAN MAIN MISSILE POWER CHANGEOVER SWITCH | FAR 27-08177-5 | 850529 | WTR | YES NO | KINETICS | 0939829 |
| FAILURE MODE-FAIL DURING OPERATION. SUSPECTED ARCING SWITCH CONTACTS. | | | | | | | |
| CORRECTIVE ACTION-NONE. SWITCH WAS RETURNED TO 60/C RECEIVING INSPECTION INSTEAD OF PERFORMING FAILURE ANALYSIS. | | | | | | | |

GENERAL MANICS
CONVAIR DIVISION

15 JUN 1966

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | SITE TIME DIP | PRI OTH | VENDOR NAME VENDOR PART NO | |
|--|--|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| ELECTRICAL-A/B POWER DISTRIBUTION | CT-99-143-061 ELECTRICAL SOCKET ASSEMBLY 16 | FAR NONE | 850311 | FACTORY | YES NO | GRAY HULEGUARD 582-212 | 993982 |
| FAILURE MODE-STRUCTURAL: CONTACT CRACKING OF 250 SOCKET ASSEMBLIES OCCURRED DURING CRIMPING OPERATION AT 60/C FACTORY. | | | | | | | |
| CORRECTIVE ACTION-REQUEST THE VENDOR TO USE HARDER MATERIAL, BETTER ASSEMBLY TECHNIQUES, AND IMPROVED CRIMPING METHOD. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | ETR-009/P2-4CO-02-204 UMBILICAL CONNECTOR | COMPOSITE-J FALT | 2040 850303 | 12 0 | YES NO | | 997932 |
| FAILURE MODE-FAILED TO OPERATE AT PRESCRIBED TIME. UMBILICAL PADDI ADJUSTMENT WAS TOO TIGHT AND IT DID NOT ELECTRICALLY EJECT AT T-O. | | | | | | | |
| SYSTEM EFFECT-IMPROPER ANALOG SIGNALS. | | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. UMBILICAL WAS EJECTED MANUALLY. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 69C2629.3 DISTRIBUTION BOX-B1 PCD | UTP-SLT 69-81050-811 | 850303 | 60/C | YES NO | 60/C | 991797 |
| FAILURE MODE-STRUCTURAL. FOLLOWING THE X, Y, AND Z-AXIS RANDOM/SINE VIB-TEMP-ALT TEST (ALT LEVEL VIB, TEMP 100 DEG F, ALT 1 MM HG) ALL EIGHT FILLET WELDS HAD BROKEN LOOSE FROM THE MOUNTING TABS AND TWO OF THE TABS HAD STARTED TO TEAR LOOSE FROM THE BOTTOM OF THE BOX. NO ELECTRICAL MALFUNCTIONS WERE EVIDENT. WELDS WERE SUBSTANDARD AND NOT PER SPEC MIL-W-8806. | | | | | | | |
| CORRECTIVE ACTION-MANUFACTURING AND INSPECTION DEPARTMENTS WERE ADVISED OF PROBLEM AND INSTRUCTED TO TAKE APPROPRIATE ACTION TO IMPROVE WELD QUALITY. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | LV-9B-14-233F HARNES | FAR 27-92711-409 | 2040 850222 | ETR | YES NO | 60/C | 993933 |
| FAILURE MODE-ELECTRICAL OPEN CIRCUIT FROM BROKEN WIRE AT PIN 31. | | | | | | | |
| CORRECTIVE ACTION-NONE. CAUSE OF FAILURE COULD NOT BE FOUND. | | | | | | | |

GENERAL DYNAMICS
CONVAIR DIVISION

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DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | SITE TIME DIP | PRI OTH | VENDOR NAME VENDOR PART NO | |
|--|---|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| ELECTRICAL-A/B POWER DISTRIBUTION | A1-4HO-02-211 UMBILICAL CONNECTOR | COMPOSITE-PRD/DPL | 211D 650214 | A1 | NO NO | | 000075 |
| FAILURE MODE-OUT OF TOLERANCE. LOSS OF PCB CLOSED INDICATION OCCURRED DUE TO A LOOSE UMBILICAL CONNECTOR. | | | | | | | |
| SYSTEM EFFECT-IMPROPER DISCRETE SIGNALS. | | | | | | | |
| VEHICLE EFFECT-COMPOSITE DELAYED. | | | | | | | |
| CORRECTIVE ACTION-UMBILICAL 600P4 TIGHTENED. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 89A2141-3 LOZ LEVEL PROBE | UTP-PRT 89-43205-3 | 650218 | 60/C | YES NO | | 002200 |
| FAILURE MODE-OPEN (ELECTRICAL). DURING PROOF CYCLE, AFTER NON-OPERATING VIBRATION TEST, BOTH SENSOR CIRCUITS WERE FOUND OPEN. REF. TASK HISTORY LOG NO. 962-8-023, 3/M 410-0015. | | | | | | | |
| CORRECTIVE ACTION-NONE. UNIT TESTED TO A RANDOM/SINE VIBRATION WHICH IS NOT A SPECIFICATION REQUIREMENT. THE UNIT WAS TESTED TO ENVIRONMENTS EXCEEDING DESIGN REQUIREMENTS. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A3-4HO-01-301 UMBILICAL | COMPOSITE-PRD/DPL | 301D 650218 | A3 | YES NO | | 000403 |
| FAILURE MODE-PREATURE OPERATION. UMBILICALS 800PE, P5, P4, P6 AND 10SP1 EJECTED AT COMMIT START. | | | | | | | |
| SYSTEM EFFECT-OPERATION STOPS PREMATURELY. | | | | | | | |
| VEHICLE EFFECT-COMPOSITE ABORTED. | | | | | | | |
| CORRECTIVE ACTION-2-INCH MOTION SWITCH WAS WIRED BACKWARDS. WIRING CORRECTED. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | CT-98-14-080 HARNES | FAR 95-44501-829 | 158D 650209 | ETR | YES NO | | 000075 |
| FAILURE MODE-ELECTRICAL SHORT CIRCUIT OCCURRED AT THE (AMP) SPLICE. A PORTION OF CONDUCTOR ZIM18080 WIRE STRANDS WERE NOT CONTAINED WITHIN THE CRIMP SLEEVE. THESE LOOSE WIRES SHORTED TO ADJACENT CONDUCTORS. THIS FAULT WOULD CAUSE LOSS OF POWER TO SAFE-SIDE OF SWITCH 34. | | | | | | | |
| CORRECTIVE ACTION-APPROPRIATE 60/C PERSONNEL SHOULD BE REQUESTED TO ADHERE TO SPECIFICATION 28.268 IN THE INSTALLATION OF (AMP) SPLICES. | | | | | | | |

GENERAL DYNAMICS
CONVAIR DIVISION

15 JUN 1966

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO |
|---|---|--------------------------------|------------------------------|----------------------------|-------------------------------|
| ELECTRICAL-A/B POWER DISTRIBUTION | 89CE489.3 DISTRIBUTION BOX-B1 POD | UTP-PRT 89-41030-811 | 850203 60/C | YES 60/C NO | 890786 |
| FAILURE MODE-STRUCTURAL. DURING 2-AXIS RANDOM/SINE VIB-TEMP-ALT. TEST (PRT LEVEL VIB, TEMP TO DEG F, ALT 1 MM HG) 10 WELDS BROKE LOOSE BETWEEN THE BOTTOM MOUNTING TABS AND SIDE CHANNELS. INVESTIGATION REVEALED THAT THE WELDS WERE SUBSTANDARD AND DID NOT MEET THE REQUIREMENTS OF MIL-W-8804. LACK OF WELD PENETRATION COMBINED WITH THE NOTCHES AT THE ROOT WAS CAUSE OF FAILURE. | | | | | |
| CORRECTIVE ACTION-THE FACTORY AND QUALITY CONTROL WAS INSTRUCTED TO TAKE APPROPRIATE ACTION TO IMPROVE WELD QUALITY. THE TEST WAS CONTINUED PROVIDED THAT THE BOX REMAINS IN TACT. | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 87C4028 SWITCH-POWER CHANGEOVER | UTP-PRT 7-01722-3 | 850202 60/C | YES KINETICS NO MIL-2-4 | 890986 |
| FAILURE MODE-CONTAMINATION. DURING FINAL SATISFACTORY PERFORMANCE TEST, THE VOLTAGE DROP ACROSS SEVERAL CONTACTS EXCEEDED THE MAXIMUM ALLOWABLE OF 150MV. VOLTAGE DROPS WERE AS HIGH AS 180MV. CAUSE ATTRIBUTED TO OXIDIZING OF CRANOLINE LUBRICANT WHICH FORMS A NON-CONDUCTING FILM ON CONTACTS. | | | | | |
| CORRECTIVE ACTION-VENDOR VCP APPROVED TO INCORPORATE USE OF BLACK SEALING COMPOUND PS-380, INSTEAD OF SOLDER TO SEAL SWITCH ASSEMBLY AND THE USE OF ANGIARD LUBRICANT WHICH DOES NOT OXIDIZE AS READILY AS CRANOLINE. TEST RETURN BATTN ACTUALLY. | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 89CE489.3 DISTRIBUTION BOX-B1 POD | UTP-PRT 89-41030-811 | 850122 60/C | YES 60/C NO | 890786 |
| FAILURE MODE-STRUCTURAL. DURING 2-AXIS RANDOM/SINE VIBRATION-TEMPERATURE ALTITUDE TEST (PRT LEVEL VIBRATION, TEMP 70 DEGREES F, ALT 1 MM HG) FOUR WELD POINTS BROKE LOOSE BETWEEN TWO OF THE BOTTOM MOUNTING TABS AND SIDE CHANNELS. INVESTIGATION REVEALED THAT THE WELDS WERE SUBSTANDARD AND DID NOT MEET THE REQUIREMENTS OF MIL-W-8804. LACK OF WELD PENETRATION COMBINED WITH THE NOTCHES AT THE ROOT WAS CAUSE OF FAILURE. | | | | | |
| CORRECTIVE ACTION-THE FACTORY WAS INSTRUCTED TO TAKE APPROPRIATE ACTION TO IMPROVE WELD QUALITY. QUALITY CONTROL WAS ADVISED OF THE WELD PROBLEM AND RE-LOOKOUT FOR POOR QUALITY WELDS. THE TEST WAS CONTINUED WITH THE SAME CHASSIS INSTALLED IN A NEW BOX OBTAINED FROM PRODUCTION LOT. | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | LV-98-20-3040-F DEMULATOR | FAR 7-43040-837 | 850121 60/C | YES 60/C NO | |
| FAILURE MODE-ELECTRICAL OPEN-REPORTED FAILURE OF P/U COMPUTER COMPARTMENT WAS DISCOVERED WHEN AN ATTEMPT TO ADJUST THE VALVE ANGLE UPPER LIMIT, BY ADJUSTMENT OF POTENTIOMETER R-302, FAILED. LIMITER SECTION OF DEMULATOR ASSY WAS IN OPERATIVE DUE TO OPEN CIRCUIT AT TERMINAL M. THE OPEN CIRCUIT OCCURRED BECAUSE SHAGED TERMINAL HAD NOT BEEN SOLDERED | | | | | |

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DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DA E DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO |
|---|---|--------------------------------|---------------------|------------------|----------------------------------|-------------------------------|
| TO PRINT CIRCUIT AS REQUIRED. | | | | | | |
| CORRECTIVE ACTION-SURVEY INSTRUCTION 10-65 WITH INSTRUCTIONS TO LOCATE AND REJECT ALL NEW PRODUCTION P/N 7-43444-81 S DEMODULATOR ASSY AND P/N 7-43446-807 ISOLATION AMPLIFIER ASSY SO THEY MAY BE INSPECTED FOR SOLDER BETWEEN TERMINAL POSTS AND PRINTED CIRCUITRY AND BE REMOVED IF NECESSARY. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 89C4382-12 CONTROL UNIT ASSEMBLY-040 | UTP-EIT 69-61120-3 | 650113 | 60/C | YES 60/C NO | |
| FAILURE MODE-SPECIMEN OPENED FOR INTERNAL EXAMINATION AFTER COMPLETION OF ETT. SWAGE ELECTRICAL TERMINAL (NO. 1) ON TB-1 WAS DAMAGED AND LOOSENED REF TEST REPORT PHOTO NO 3 GOC NEG NO 663108. | | | | | | |
| CORRECTIVE ACTION-MEMO TO QUALITY CONTROL DIRECTS SPECIAL EMPHASIS ON SURVEILLANCE OF EXPOSED TERMINALS ON TB-1. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 27C4028 SWITCH-POWER CHANGEOVER | UTP-PET 7-01722-3 | 650108 | | YES KINETICS NO M172-4 | |
| FAILURE MODE-OUT OF SPECIFICATION. DURING EXAMINATION OF PRODUCT, IT WAS FOUND THAT THE NAME PLATE DATA DID NOT COMPLY WITH 27-02065 SPECIFICATION REQUIREMENTS. THE SPECIFICATION NUMBER AND SPECIFICATION CONTROL DRAWING DID NOT APPEAR ON THE NAME PLATE. INSPECTION PASSED ALL PREVIOUS UNITS WHICH HAD THE SAME NAME- PLATES AS THE FAILED PART. | | | | | | |
| CORRECTIVE ACTION-VENDOR ACTION TAKEN TO MODIFY THE NAMEPLATE DECAL TO COMPLY WITH SPECIFICATION 27-02065. INSPECTOR INSTRUCTED TO TAKE STEPS TO INSURE THAT THIS TYPE OF DISCREPANCY DOES NOT RECUR. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 69A1926.1 DISCONNECT-STAGING/AUTOPILOT | UTP-SLT 7-06347-8 | 641228 | 60/C | YES AMPHENOL YES 200X-30-1002 | |
| FAILURE MODE-OUT OF TOLERANCE. DURING THE PROOF CYCLE FOLLOWING THE Z-AXIS VIBRATION, OUT-OF-TOLERANCE VOLTAGE DROP MEASUREMENTS WERE RECORDED ON SEVERAL PINS. THIS TEST WAS ACCOMPLISHED WITH SPECIMEN STABILIZED AT 280 DEGREES F. TESTING WAS CONTINUED RATHER THAN CONDUCT A FAILURE ANALYSIS AT THIS TIME. PART IS MATED WITH P/N 7-06348-11. THE PART WAS EJECTED AND RE-ENGAGED. AT THIS TIME ACCEPTABLE READINGS WERE OBTAINED. THIS INDICATES THAT (S) POSSIBLY THAT CONTAMINATES WERE PRESENT ORIGINALLY OR (2) ENGAGEMENTS PRODUCED SUFFICIENT VIBRING ACTION TO MEET SPECIFIED CONTACT VOLTAGE DROP TEST. (REF. PRR 1508). | | | | | | |
| CORRECTIVE ACTION-NONE. | | | | | | |

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GENERAL DYNAMICS
CONVAIR DIVISION

15 JUN 1966

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|--|---|--------------------------------|---------------------|------------------|------------|-------------------------------|----|
| ELECTRICAL-A/B POWER DISTRIBUTION | 69C2831.3 JUNCTION BOX SCREWS | UTP-PAT 69-61030-3 | 641217 | 60/C | YES | 60/C | NO |
| FAILURE MODE-OUT OF TOLERANCE. DURING INSPECTION AFTER TIGHTENING J1X AND J3X GROUND SCREWS THE RESISTANCE BETWEEN GROUND PIN J1X AND EACH OTHER GROUND WAS BETWEEN 0.170 AND 0.231 OHMS. (SPEC. LIMIT IS 0.1 OHMS) INVESTIGATION REVEALED THE CONNECTOR MOUNTING SCREWS WHICH ALSO SERVE AS GROUNDING HARDWARE APPARENTLY WERE LOOSE. | | | | | | | |
| CORRECTIVE ACTION-SURVEY INSTRUCTION S/N 42-64 WAS ISSUED 30 APRIL 64 TO SURVEY ALL BOXES MANUFACTURED TO DATE FOR LOOSE SCREWS, BACKSHELLS, TERMINAL BOARD NUTS AND DIMENSIONS. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 69C2831.3 JUNCTION BOX-SCREW | UTP-PAT 69-61030-3 | 641217 | 60/C | YES | 60/C | NO |
| FAILURE MODE-OUT OF TOLERANCE. DURING 18PT THE RESISTANCE BETWEEN GROUND PIN J1X AND EACH OTHER GROUND PIN J3X WAS BETWEEN 0.799 AND 1.179 OHMS. (SPEC. LIMIT IS 0.1 OHMS). INVESTIGATION REVEALED THE CONNECTOR MOUNTING SCREWS WHICH ALSO SERVE AS GROUNDING HARDWARE APPARENTLY WERE LOOSE. | | | | | | | |
| CORRECTIVE ACTION-SURVEY INSTRUCTION S/N 42-64 WAS ISSUED 30 APRIL 64 TO SURVEY ALL BOXES MANUFACTURED TO DATE FOR LOOSE SCREWS, BACKSHELLS, FORMAL BOARD NUTS, AND DIMENSIONS. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 69C2831.3 JUNCTION BOX SCREW | UTP-PAT 69-61030-3 | 641217 | 60/C | YES | 60/C | NO |
| FAILURE MODE - OUT OF TOLERANCE. DURING HIGH TEMP HUMIDITY TEST THE RESISTANCE BETWEEN GROUND PIN J3X AND EACH OTHER GROUND WAS BETWEEN 0.133 AND 0.166 OHMS. (SPEC. LIMIT IS 0.1 OHMS). INVESTIGATION REVEALED THE CONNECTOR MOUNTING SCREWS WHICH ALSO SERVE AS GROUNDING HARDWARE APPARENTLY WERE LOOSE. | | | | | | | |
| CORRECTIVE ACTION-SURVEY INSTRUCTION S/N 42-64 WAS ISSUED TO SURVEY ALL BOXES MANUFACTURED TO DATE FOR LOOSE SCREWS, BACKSHELLS, TERMINAL BOARD NUTS AND DIMENSIONS. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 27C4028 SWITCH-POWER CHANGEOVER | UTP-PET 7-01722-3 | 641215 | 60/C | YES | KINETICS MC N172-4 | |
| FAILURE MODE-OUT OF TOLERANCE. DURING EXAMINATION OF PRODUCT, THE THICKNESS OF THE MOUNTING FLANGE WAS MEASURED TO BE 0.074 INCHES, WHICH IS 0.002 INCHES GREATER THAN THE MAXIMUM TOLERANCE. A DISCREPANCY WAS FOUND TO EXIST BETWEEN 60/C SPECIFICATION CONTROL DRAWING AND THE VENDOR DRAWING CONCERNING DIMENSIONAL TOLERANCES. | | | | | | | |
| CORRECTIVE ACTION-SINCE THE VENDOR DRAWING HAD BEEN APPROVED PER DATA ARTICLE 06, THE 60/C SPECIFICATION CONTROL DR | | | | | | | |

GENERAL DYNAMICS
CONVAIR DIVISION

15 JUN 1966

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO |
|--|---|--------------------------------|---------------------|------------------|------------|-----------------------------------|
| AWING WAS CHANGED TO ALLOW FOR THIS DIMENSIONAL OUT-OF-TOLERANCE. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 89C2630.3 JUNCTION BOX-B2P03 | UTP-PAT 89-61016-601 | 841119 | 6D/C | YES | 6D/C NO |
| FAILURE MODE-OUT OF SPECIFICATION. DURING EXAMINATION OF PRODUCT, DIMENSION FROM CENTER OF MOUNTING HOLE TO THE SPECIMEN OUTER SURFACE MEASURED 1.42 INCHES. (SPEC. IS 1.44 TO 1.50 INCHES). | | | | | | |
| CORRECTIVE ACTION-TEST CONTINUED SINCE THIS DISCREPANCY DOES NOT AFFECT OPERATION OF UNIT. FACTORY ADVISED OF DISCREPANCY. A.C. 100K INITIATED ACTION 12-23-64 TO PREVENT RECURRENCE OF THIS PROBLEM. FACTORY PLANNING REVISED TO INCORPORATE REQUIRED DIMENSIONAL INSPECTION. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 89C2629.3 DISTRIBUTION BOX-B1 P03 | UTP-PAT 89-61030-811 | 841119 | CONVAIR | YES | 6D/C NO |
| FAILURE MODE-OUT OF SPECIFICATION. DURING EXAMINATION OF PRODUCT THE SPECIMEN WEIGHED 23.5LBS. THE MINIMUM WEIGHT REQUIREMENT IS 23 LBS. PRODUCTION EXPERIENCE INDICATES THAT THE SPECIFICATION WEIGHT LIMIT IS TOO RESTRICTIVE FOR NORMAL MANUFACTURING METHODS. | | | | | | |
| CORRECTIVE ACTION-SPECIFICATION 89-66303 WAS REVISED TO ALLOW FOR OVER WEIGHT CONDITION. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | SLV-A9-14-229-F SWITCH-CHANGEOVER | FAR 27-08177-3 | 841120 | FACTORY | YES | NO |
| FAILURE MODE-CONTAMINATION. SWITCH WOULD NOT TRANSFER FROM EXTERNAL TO INTERNAL POSITION POSSIBLY DUE TO ONE OR MORE OF SEVERAL FIBRES FOUND LOOSE AROUND BRUSHES AND COMMUTATOR. SUSPECT FIBRE BETWEEN BRUSH AND COMMUTATOR BUT NOT CONFIRMED. | | | | | | |
| CORRECTIVE ACTION-VENDOR WAS ADVISED OF FAILURE AND SUSPECTED CAUSE. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | LV-99-14-231-F CONNECTOR | FAR 81-55900-718 | 841119 | FACTORY | YES | BENDIX NO P107C-20-41PX 101 |
| FAILURE MODE-FAILED HELIUM LEAKAGE TEST DUE TO INADEQUATE SEAL BETWEEN INSERT AND CASE. DUE TO SOLVENT ENTRAPMENT CAUSED BY INADEQUATE CLEANING BEFORE ASSEMBLY OR IMPROPER APPLICATION OF ADHESIVE. | | | | | | |
| CORRECTIVE ACTION-VENDOR WAS ADVISED OF FAILURE BUT DECLINED ACTION BECAUSE CONNECTOR WAS NOT AVAILABLE TO THEM FOR ANALYSIS. | | | | | | |

15 JUN 1986

GENERAL MANICS
CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|--|--|--------------------------------|---------------------|------------------|------------|---------------------------------------|--------|
| ELECTRICAL-A/B POWER DISTRIBUTION | 89C2631-3 JUNCTION BOX SCREW | UTP-PAT 89-81030-3 | 841104 | GD/C | YES | GD/C NO | 893676 |
| FAILURE MODE-OUT OF TOLERANCE. DURING INITIAL SATISFACTORY PERFORMANCE TEST THE RESISTANCE BETWEEN GROUND PIN J58 A AND EACH OTHER GROUND WAS BETWEEN 0.8 AND 1.1 OHMS AND BETWEEN GROUND PINS J1E AND J1X 18 0.9 OHMS (SPEC. LIMIT IS 0.1 OHMS) INVESTIGATION REVEALED THE CONNECTOR MOUNTING SCREWS WHICH ALSO SERVE AS GROUNDING HARDWARE APPARENTLY WERE LOOSE. | | | | | | | |
| CORRECTIVE ACTION-SURVEY INSTRUCTION. S/N 42-84 WAS ISSUED 30 APRIL 1984 TO SURVEY ALL BOXES MANUFACTURED TO DATE FOR LOOSE SCREWS, BACKSHELLS, TERMINAL BOARD NUTS, AND DIMENSIONS. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-99-20-3037-F LIQUID OXYGEN CONTROL UNIT | FAR 27-43021-3 | 3010 841030 | FACTORY | YES | CALIF. INSTR. CO RP. 27-43021-3 | 894493 |
| FAILURE MODE-ELECTRICAL SHORT. FAILURE WAS DISCOVERED DURING CHECKOUT OF NEXT ASSEMBLY (P/N 27-44432-19), PROPELLANT CONTROL UNIT. DURING TESTING, PER EOP 330.351, THE B NET LAMP ILLUMINATED, HOWEVER, PROCEDURE STATES THE B DRY LAMP SHOULD BE LIT. | | | | | | | |
| CORRECTIVE ACTION-THE VENDOR WAS REQUESTED TO IMPROVE ASSEMBLY, INSPECTION, AND TESTING OF UNITS TO ELIMINATE POSSIBILITY OF SHORTS BETWEEN LEAD WIRES AND CASE. THE VENDOR CONDUCTED COMPLETE INVESTIGATION OF ASSEMBLY METHODS, INSPECTION, AND TEST PROCEDURES. WILL USE TEFLON-INSULATED WIRE OR SLEEVING INSTEAD OF VINYL-INSULATION. ALSO INCORPORATE A CONNECTION BETWEEN CASE GROUND AND SIGNAL GROUND DURING FUNCTIONAL TEST. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 89A2141-3 LOX LEVEL PROBE | UTP-PRT 89-43209-3 | 841029 | GD/C | YES | GD/C NO | 892807 |
| FAILURE MODE-SHORT (ELECTRICAL). DURING PRT INSULATION TEST OF THE POST HIGH TEMPERATURE-ALTITUDE HUMIDITY PROOF CYCLE, THE UNIT WAS BELOW THE ALLOWABLE OF ONE MEGOHM MINIMUM. ACTUAL ON UNIT WERE AS FOLLOWS-PIN A TO CASE 80 MEGOHMS; PIN B TO CASE 20; PIN C TO CASE SHORTED; PIN D TO CASE SHORTED. REF. TASK HISTORY LOG NO. 862-9-006 S/N 408-0010. | | | | | | | |
| CORRECTIVE ACTION-I.R. UNIT. REPLACE WITH A NEW UNIT AND RETEST. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 89V-99-14-227-F BOX-DISTRIBUTION | FAR 89-81030-613 | 841026 | FACTORY | YES | GD/C NO | |
| FAILURE MODE-CONTAMINATION. OUT OF TOLERANCE WITH RESPECT TO INSULATION RESISTANCE BETWEEN CONNECTOR PINS AND CHASSIS IS GROUND DUE TO INADEQUATE DRYING BEFORE ENCAPSULATION. | | | | | | | |

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GENERAL MATICS
CONVAIR DIVISION

19 JUN 1966

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PAI OTH VENDOR PART NO | VENDOR NAME |
|--|---|--------------------------------|---------------------|------------------|-----------------------------|-------------|
| CORRECTIVE ACTION-PERSONNEL WERE CAUTIONED TO CAREFULLY FOLLOW ALL POTTING PROCEDURES. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | SLV-PL-14-226-F HARNESS | FAR 81-93118-110 | 641021 | POINT LO MA | NO BENDIX NO 16-269-332 | |
| FAILURE MODE-FAIL TO OPERATE AT PRESCRIBED TIME. FAILED TO SEPARATE DURING NOSECON SEPARATION TESTS DUE TO IMPROPER MATING, RESULTING FROM HUMAN ERROR. | | | | | | |
| CORRECTIVE ACTION-ALL PERSONNEL WERE ADVISED OF THIS FAILURE AND THE CAUSE. THEY WERE CAUTIONED TO EXERCISE CARE IN MATING THE CONNECTOR. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | SLV-PL-14-226-F CONNECTOR | FAR 69-61033-1 | 641021 | POINT LO MA | YES BENDIX NO 16-269-332 | |
| FAILURE MODE-FAIL TO OPERATE AT PRESCRIBED TIME. FAILED TO SEPARATE DURING NOSECON SEPARATION TESTS DUE TO IMPROPER MATING RESULTING FROM HUMAN ERROR. THERE WERE TWO CONNECTORS COVERED ON THIS REPORT. | | | | | | |
| CORRECTIVE ACTION-ALL PERSONNEL WERE ADVISED OF THIS FAILURE AND THE CAUSE AND CAUTIONED TO EXERCISE CARE IN MATING THE CONNECTOR. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 88C2631.3 JUNCTION BOX | UTP-FAT 69-61030-9 | 641019 | CONVAIR | YES 60/C NO | |
| FAILURE MODE-OUT OF TOLERANCE. DURING EXAMINATION OF PRODUCT THE DIMENSIONS WHICH LOCATES THE 602UR STENCIL MEASURED 2.4 INCHES IN ONE DIRECTION. (SHOULD BE 2.0 TO 2.2 INCHES). | | | | | | |
| CORRECTIVE ACTION-QUALITY CONTROL WAS INSTRUCTED TO ENFORCE MORE RIGID INSPECTION IN THIS AREA. (REF. FRR 415). | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | CT-98-14-032 HARNESS | FAR PT08E-6-39/101 | 1480 640929 | ETH | YES BENDIX NO | |
| FAILURE MODE-ELECTRICAL OPEN CIRCUIT FROM A BENT PIN. THIS DISCREPANCY WAS FOUND DURING TEST PREPARATION. LOSS OF A WTOPLOY COMMAND COULD RESULT FROM THIS PARTS ELECTRICAL FAILURE. | | | | | | |
| CORRECTIVE ACTION-CAUTION INSTALLATION PERSONNEL IN AN EFFORT TO PREVENT IMPROPER CONNECTOR MATING AND TORSUING. ESTABLISH QUALITY ASSEMBLY STANDARDS FOR CONNECTOR PLUGS. | | | | | | |

18 JUN 1968

GENERAL WAREHOUSE
CONVAIN DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO |
|--|--|--------------------------------|---------------------|------------------|------------|--|
| ELECTRICAL-A/B POWER DISTRIBUTION | CT-98-14-031 ELECTRICAL HARNESS - CONNECTOR | FAR CP3108-E103L | 1460 840929 | ETR | YES NO | YES SENDIX |
| FAILURE MODE-STRUCTURAL IMPERFECTIONS WERE FOUND DURING REQUIRED X-RAY INTERPRETATION OF THE PART. THE PART WAS REJECTED FOR THIS REASON ONLY. LOSS OF AUTOPILOT COMMAND COULD RESULT FROM THE PARTS ELECTRICAL FAILURE. | | | | | | |
| CORRECTIVE ACTION-CONTINUE X-RAYING ON A SAMPLING BASIS. IMPROVE MANUFACTURING AND QUALITY CONTROL OF THE PART. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | CT-98-14-031 ELECTRICAL HARNESS CONNECTOR | FAR PT08E-8-38/101 | 1460 840929 | ETR | YES NO | YES SENDIX |
| FAILURE MODE-STRUCTURAL IMPERFECTIONS WERE FOUND DURING REQUIRED X-RAY INTERROGATION OF THE PART. THE PART WAS REJECTED FOR THIS REASON ONLY. LOSS OF AUTOPILOT COMMAND COULD RESULT FROM THE ELECTRICAL FAILURE OF THE PART. | | | | | | |
| CORRECTIVE ACTION-CONTINUE X-RAYING ON A SAMPLING BASIS. IMPROVE MANUFACTURING AND QUALITY CONTROL OF THE PART. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | SLV-A1-04-4085-F HARNESS | FAR 0-78045-849 | 840914 | FACTORY | YES NO | |
| FAILURE MODE-FAILED DURING OPERATION. GROUND RETURN WIRE FOR REMOTE RATE GYRO HEATERS (875 INCHES LONG) HAD TOO HIGH WIRE RESISTANCE. 0.631 VS 0.303 OHM. ANALYSIS: FOUND SUBJECT WIRE WAS WRONG SIZE. IT WAS NUMBER 22 SIZE INSTEAD OF NUMBER 20 AS MARKED. CAUSE OF MISMARKING IS UNKNOWN. | | | | | | |
| CORRECTIVE ACTION-WIRE PROCESSING AND INSPECTION PERSONNEL INFORMED TO TRY AND PREVENT MISMARKING. ALL A/P WIRES ON SLV MISSILES WERE CHECKED TO ASSURE CORRECT SIZING AND MARKING. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | SLV-90-24-4809F CONNECTOR | FAR 91-88837-018 | 7103 840902 | WTR | YES NO | YES PHYSICAL SCIENTIST NO CES HPUS8P-103L-49 |
| FAILURE MODE-OUT OF TOLERANCE. PIN B HAD INTERMITTENT HIGH RESISTANCE. THIS WAS CAUSED BY IMPROPER FLUXING AND INSUFFICIENT METAL IN BRAZING THE SOLDER CUP TO THE PIN. THIS BRAZE JOINT WAS MADE AT ASTRONAUTICS. | | | | | | |
| CORRECTIVE ACTION-QUALITY CONTROL IN MANUFACTURING DEPARTMENT WAS IMPROVED. | | | | | | |

GENERAL JAMES
CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF OTH | VENDOR NAME VENDOR PART NO |
|--|---|--------------------------------|---------------------|---------------------------------------|-------------------------------|
| ELECTRICAL-A/B POWER DISTRIBUTION | 8968147-3 RECEPTACLE, UNIBILICAL CONNECTOR | UTP-PRT E7-07847-9 | 640902 | YES CANNON YES DB718-6366 | |
| FAILURE MODE-OUT OF TOLERANCE. FOLLOWING Y-AXIS VIBRATION (RANDOM ONLY, 2G SQUARE PER CPS) THE SPECIMEN WOULD NOT MECHANICALLY EJECT WHEN A LANYARD FORCE OF 120 LBS WAS APPLIED. (SPEC IS 25 TO 100 LBS). SEPARATION WAS ACCOMPLISHED BY ROCKING THE CONNECTOR. EXCESSIVE CONTACT WEAR, PRODUCED BY MISALIGNMENT, CAUSED INCREASED SEPARATION FORCED BEYOND CAPABILITY OF EJECTION SPRINGS. | | | | | |
| CORRECTIVE ACTION-SPECIMEN IRID) FOR REPLACEMENT, CORR F-4343-SC-1 ISSUED TO FACTORY TO AMEND AFFECTED MS(S) RESULTING PIN AND SOCKET ALIGNMENT DURING POTTING. | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | CT-98-143-047 ELECTRICAL RELAY | FAR 66-73901-015 | 640901 | FACTORY YES HARTMAN ELECTRIC NO IC | |
| FAILURE MODE-FAIL DURING OPERATION BY CONTACTS NOT CLOSING. INADEQUATE SPRING CONTACT MATERIAL IS USED. | | | | | |
| CORRECTIVE ACTION-VENDOR TO IMPROVE QUALITY CONTROL. RELAY SHOULD BE REPLACED WITH A MORE RELIABLE ONE. | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | LV-90-20-3023-F CONNECTOR- | FAR 27-43016-23 | 640825 | MTR YES 60/C NO | |
| FAILURE MODE-ELECTRICAL SHORT-P/W SET REPORTEDLY FAILED DURING TESTING PER PROCEDURE 27-90282. TEST-POINT ZERO HAD AN OUTPUT VOLTAGE READINGS OF MINUS 21 VOLTS DC. SPEC. REQUIRE AN OUTPUT OF POSITIVE DC VOLTAGE. FAILURE WAS CAUSED BY A HIGH RESISTANCE; "SHORT IN COAXIAL CONNECTOR J-103. | | | | | |
| CORRECTIVE ACTION-CURRY INSTRUCTION 103-64 REQUIRES INSPECTION AND TESTING OF ALL P/U MATCHED SETS, INCLUDING AN INSPECTION OF COAXIAL CONNECTORS J-103 AND J-104. THESE COAXIAL CONNECTORS ARE NOW POTTED WITH PRO-Seal 777, AND NOT WITH THE RTV COMPOUND USED IN THE DEFECTIVE ASSEMBLY. | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | CT-90-14-044 ELECTRICAL CONNECTOR | FAR 92-40002-002 | 640803 | ETK YES CANNON NO | |
| FAILURE MODE-ELECTRICAL OPEN CIRCUIT FROM OPEN WIRING TO PIN B OF PLUG P-30 CAUSED BY OVER TIGHTENING. | | | | | |
| CORRECTIVE ACTION-ALERT FACTORY PERSONNEL TO EXERCISE GREATER CARE IN INSTALLATION AND TIGHTENING OF ELECTRICAL PLUGS. | | | | | |

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GENERAL JAMES
CONVAIN - VISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO |
|--|---|--------------------------------|---------------------|------------------|------------|-------------------------------|
| ELECTRICAL-A/B POWER DISTRIBUTION | LV-A9-14-225-F HARNES | FAR 27-61890-409 | 289-D 640724 | FACTORY | YES NO | 60/C |
| FAILURE MODE-STRUCTURAL FAILURE DUE TO PUNCTURE OF VINYL COVERING OF ONE WIRE IN SEVERAL PLACES. CAUSE OF FAILURE NOT DETERMINED BUT SHIELD UNDER COVERING WAS DAMAGED. | | | | | | |
| CORRECTIVE ACTION-ASSEMBLY AND INSTALLATION PERSONNEL WERE ADVISED OF THE FAILURE AND USE OF PROPER TOOLS WAS RE-EMPHASIZED. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-A9-04-4857-F HARNES | FAR 27-62323-1 | 640718 | FACTORY | YES NO | |
| FAILURE MODE-CONTAMINATION. HARNES ASSY. REPORTEDLY FAILED WHEN COAXIAL CABLE R-30 HAD LOW DIELECTRIC BREAKDOWN VOLTAGE. TESTS SHOWED THE COAXIAL CABLE R-3 BROKE DOWN AT 1400 VMS. FAILURE WAS ATTRIBUTED TO ONE STRAND OF THE OUTER CONDUCTOR PROTRUDING TOWARD THE INNER CONDUCTOR AT THE CONNECTION OF THE OUTER CONDUCTOR TO THE CONNECTOR. CONTAMINATION MAY HAVE BEEN A CONTRIBUTOR TO THE FAILURE. | | | | | | |
| CORRECTIVE ACTION-INSPECTION PROCEDURES AND MFR SPEC. REQUIREMENTS CHECKED FOR CORRECT COVERAGE. EMPHASIS WAS PLACED ON CLEANING MATERIAL FROM CONNECTOR ASSEMBLIES. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | SLV-PL-14-225-F RELAY-SWITCH | FAR 88-73901-015 | 640715 | POINT LO NA | YES NO | HARTMAN AH-980E |
| FAILURE MODE-FAILED OPEN-MICROSWITCH CONTAINED WITHIN THE RELAY CHECKED OPEN DUE TO BURNED CONTACT APPARENTLY FROM AN OVERLOAD. | | | | | | |
| CORRECTIVE ACTION-AMENDMENT 14 TO NASA CONTRACT NAS-3-3807 REQUESTED REDESIGN OF THE FAILING SYSTEM. THIS WOULD REPLACE THE ABOVE RELAY WITH ONE OF IMPROVED DESIGN. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | CT-98-143-043 ELECTRICAL RELAY | FAR 88-73901-015 | 640715 | FACTORY | YES NO | HARTMAN ELECTRA IC |
| FAILURE MODE-FAIL DURING OPERATION. RELAY CONTACTS DID NOT OPEN. INADEQUATE SPRING CONTACT EASILY ACCEPTS A PERMANENT SET. | | | | | | |
| CORRECTIVE ACTION-PURGE ALL TYPICAL RELAYS AND REPLACE WITH A MORE RELIABLE UNIT. | | | | | | |

GENERAL DYNAMICS
CONVAIR DIVISION

15 JUN 1966

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE OF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO |
|---|---|--------------------------------|--------------------|------------------|------------|-------------------------------|
| ELECTRICAL-A/B POWER DISTRIBUTION | GDA BN204-022 WIRING | FLIGHT | 1330 840830 | GO/C D.3 | YES NO | GO/C/A |
| <p>FAILURE MODE-SHORT (ELECTRICAL). THE EDO SIGNAL ROSE ABRUPTLY TO A SATURATED LOG-RICH LIMIT INDICATION OF PLUS 13 V DC. IT REMAINS AT THIS LEVEL UNTIL 70.1 SECONDS AND DROPPED SHARPLY TO -1.98 VDC (NORMAL). THE EDO DATA WAS NORMAL FOR THE REST OF THE FLIGHT. THIS FAILURE IS BELIEVED CAUSED BY A SHORTED ELECTRICAL LEAD IN THE LOG MANOMETER SIDE OF THE BRIDGE ERROR DETECTOR INCLUDING THE MANOMETER CABLE AND CONNECTORS.</p> <p>SYSTEM EFFECT-IMPROPER ANALOG SIGNALS. VEHICLE EFFECT-NONE. NO DIRECT EFFECT ON FLIGHT. BURMIABLE PROPELLANTS RESIDUALS WERE CALCULATED TO BE 2376 LBS OF LOG AND 1187 LBS OF FUEL. ACTUAL OUTAGE ON THIS FLIGHT WAS ONLY 81 LBS LESS THAN PLANNED.</p> <p>VEHICLE EFFECT-NONE. NO DIRECT EFFECT ON FLIGHT. BURMIABLE PROPELLANTS RESIDUALS WERE CALCULATED TO BE 2376 LBS OF LOG AND 1187 LBS OF FUEL. ACTUAL OUTAGE ON THIS FLIGHT WAS ONLY 81 LBS LESS THAN PLANNED.</p> <p>CORRECTIVE ACTION-ALL PU SETS WERE RECYCLED THROUGH THE FACTORY FOR INSPECTION OF MANOREL COATING, CANISTER COMPONENT MOUNTING AND CONNECTIONS. REDESIGN CONNECTION MOUNTING HOLE TO PREVENT WIRE FROM BREAKING IF RECEPTACLE IS ROTATED. ALSO PLACE SLEEVING ON ALL BARE WIRES. IMPROVE O.C. AND MANUFACTURES TECHNIQUES AND MORE DETAILED INSPECTION PROCESSES.</p> | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | LV-98-20-3010F DEMODULATOR | FAR 27-43016-21 | 840825 | ETR | YES NO | GO/C |
| <p>FAILURE MODE-ELECTRICAL SHORT-P/U SET REPORTEDLY FAILURE OUT OF TOLERANCE FOR EDO WHEN ZERO PRESSURE WAS APPLIED TO THE MANOMETERS AS PER 27-90262. REPORTED FAILURE WAS CAUSED BY A HIGH RESISTANCE SHORT ACROSS CAPACITOR C-401. RUNNING-TIME LOG VERIFIED THAT THE MATCHING TEST WAS OMITTED ON THE COMPUTER COMPARATOR.</p> <p>CORRECTIVE ACTION-PERSONNEL INVOLVED IN THE HANDLING, TESTING AND INSPECTION OF THESE MATCHED SETS WERE NOTIFIED OF THE FAILURE AND ITS CAUSE.</p> | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | SLV-99-14-217-18-1F BOX-JUNCTION | FAR 69-81016-805 | 7102 840820 | FACTORY | NO NO | GO/C |
| <p>FAILURE MODE-OPEN ELECTRICAL FUSES F-1 AND F-2. OPEN DURING INITIAL TEST OF MISSILE ELECTRICAL SYSTEM DUE TO USE OF BELL BOX DURING CONTINUITY CHECKS OF JUNCTION BOX BEFORE INSTALLATION. BELL BOX DELIVERS APPROXIMATELY ONE AMPERE. THE FUSES ARE ONE HALF AMPERE.</p> <p>CORRECTIVE ACTION-USE OF THE BELL BOX AS A TEST TOOL WAS DISCONTINUED.</p> | | | | | | |

15 JUN 1968

GENERAL DYNAMICS
CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP TIME | SITE DIP TIME | PRI OTH | VENDOR NAME VENDOR PART NO |
|---|--|--------------------------------|--------------------------|------------------|----------------------------------|-------------------------------|
| ELECTRICAL-A/B POWER DISTRIBUTION | SLV-90-24-4603-P DISTRIBUTION BOX | FAR 89-61030-801 | 7101 840819 | WTR | YES NO | 994980 |
| FAILURE MODE-FAIL DURING OPERATION. DISTRIBUTION BOX BELIEVED FAILED WHEN 14 TELEMETRY MEASUREMENTS COULD NOT BE OBTAINED. | | | | | | |
| CORRECTIVE ACTION-NONE. FAILURE NOT CONFIRMED. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | SLV-99-14-224-P RELAY-SWITCH | FAR 86-73901-003 | 840812 | FACTORY | YES MARTIN NO AH-960E | 994980 |
| FAILURE MODE-FAILED OPEN-MICROSWITCH CONTAINED WITHIN THE RELAY CHECKED OPEN DUE TO BURNED CONTACT APPARENTLY FROM AN OVERLOAD. | | | | | | |
| CORRECTIVE ACTION-AMENDMENT 16 TO NASA CONTRACT NAS-3-3807 REQUESTED REDESIGN OF THE FAIRING SYSTEM. THIS WOULD REPLACE THE ABOVE RELAY WITH ONE OF IMPROVED DESIGN. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | SLV-99-14-221-P SWITCH-MAIN POWER CHANGE-OVER | FAR 27-06177-3 | 7102 840809 | FACTORY | YES UNITED CONTROL NO UNKNOWN | 994980 |
| FAILURE MODE-FAILED DURING OPERATION. SWITCH WOULD NOT TRANSFER FROM INTERNAL POSITION TO EXTERNAL DUE TO AN OPEN MOTOR CONTROL CIRCUIT RESULTING FROM A LOOSE MOUNTING NUT ON CR2. | | | | | | |
| CORRECTIVE ACTION-THIS UNIT HAD BEEN PURCHASED SOME YEARS PREVIOUSLY AND IS NO LONGER IN PRODUCTION SO NO MEANINGFUL ACTION COULD BE TAKEN. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | HARNES | FAR 27-81907-967 | 3520 840809 | WTR | YES 60/C NO | 994980 |
| FAILURE MODE-STRUCTURAL FAILURE INDICATED BY BURNING OF INSULATION OVER SPLICE AND GRIMP TOOL MARK ON INSULATING SLICE. BURN APPEARED TO BE CAUSED BY ENTRY OF FOREIGN OBJECT COMING BETWEEN THE PLASTIC INSULATOR AND BARREL AND GROUPING RESULTING IN AN ARC. | | | | | | |
| CORRECTIVE ACTION-WTR PERSONNEL REQUESTED NOT TO ALLOW OBJECTS SUCH AS TEST PROBES AND SCRIBES TO ENTER BENEATH INSULATION DURING MISSILE CHECK OUT AND TO ADHERE TO THE MANUFACTURING SPECIFICATION WHEN MAKING AMP SPLICES. | | | | | | |

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DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | SITE TIME DIP | PRI OTH | VENDOR NAME VENDOR PART NO | |
|--|---|--------------------------------|---------------------|------------------|------------------------------|-------------------------------|--------|
| ELECTRICAL-A/B POWER DISTRIBUTION | SLV-A9-14-220-F HARNES3 | FAR 88-61811-801 | 7102 840808 | | YES 60/C NO | | 885780 |
| FAILURE MODE-SHORT-ELECTRICAL. PINS 86-87-88 OF MISSILE UMBILICAL RECEPTACLE 800J2 SHORTED DUE TO THE PRESENCE OF METAL SHIMS CAUGHT BETWEEN THE FRONT AND REAR FACE OF THE RECEPTACLE RESULTING FROM MODIFICATION FROM A BALL-LOCK TO A TANG-LOCK DESIGN. CANNON ELECTRIC MODIFICATION INSTRUCTIONS DID NOT MENTION THE POSSIBLE PRESENCE OF THE SHIMS WHERE THE PART WAS MODIFIED. | | | | | | | |
| CORRECTIVE ACTION-ISSUED A SURVEY TO ACCOMPLISH A ONE TIME INSPECTION OF ALL MODIFIED CONNECTORS. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | CT-A9-14-039 ELECTRICAL RELAY | FAR 88-73901-015 | 840328 | FACTORY | YES HARTMAN ELECTRICAL | | 885871 |
| FAILURE MODE-OUT OF SPECIFICATION. BELOW TOLERANCE DROPOUT VOLTAGE. | | | | | | | |
| CORRECTIVE ACTION-INVESTIGATE A REPLACEMENT RELAY. PRESENT RELAY IS TOO COMPLEX FOR APPLICATION. IMPROVED VENDOR QUALITY CONTROL. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 69A2146 RECEPTACLE UMBILICAL CONNECTOR | UTP-BUAL/PPY 27-04999-17 | 840413 | 60/C | YES CANNON NO D17070-1045 | | 881776 |
| FAILURE MODE-OUT OF TOLERANCE. DURING 14 DAYS OF HUMIDITY TEST THE CONTACT VOLTAGE DROP ACROSS PIN 93 CENTER CONDUCTOR WAS BEYOND SPECIFICATION. | | | | | | | |
| CORRECTIVE ACTION-INVESTIGATION REVEALED THE SOCKET WAS NOT SHAGED AS REQUIRED. CANNON ELECTRIC WAS ADVISED PER CAR R F-3071-3C-1 TO IMPROVE THEIR Q.C. TO INSURE THAT RECEPTACLE COAXIAL SOCKETS ARE SHAGED TO SIZE. CANNON ACKNOWLEDGED. CORRECTIVE ACTION TAKEN. (REF. PRR 281A). | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 69A2141.2 LOR LEVEL PROBE | UTP-SLT 88-43203-3 | 840327 | 60/C | YES 60/C NO | | 882234 |
| FAILURE MODE-OPEN (ELECTRICAL). AT THE COMPLETION OF SLT, Y-AXIS NON-OPERATING VIBRATION, BOTH ELEMENTS A AND B WERE FOUND TO BE BROKEN AT BOTH TERMINAL ENDS OF EACH ELEMENT. REF. PRR NR F-4209ST, 8/NOV68. | | | | | | | |
| CORRECTIVE ACTION-TEST COMPLETE. RESOLUTION TO CAR F4209SC-1 WAS THAT THE METHODS AND EQUIPMENT FOR TESTING ARE NOW SATISFACTORY. ALSO, THE VOLTAGE LIMIT FOR RESPONSE TIME CAN BE RAISED TO 1.0 VOLT FROM 0.8 VOLT. THE RESPONSE TIME OF 0.45 SEC. REMAINS THE SAME. REF. PRR FR 894-2-84-219 SUPPLEMENT A. | | | | | | | |

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DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|--|--------------------------------|---------------------|------------------|------------------------|-------------------------------|--------|
| ELECTRICAL-A/B POWER DISTRIBUTION | 89A2133 RECEPTACLE, UMBILICAL CONNECTOR | UTP-QUAL/PPT 27-04999-17 | 640327 | 60/C | YES YES 017070-1043 | | 890837 |
| FAILURE MODE-OUT OF TOLERANCE. DURING THE CONTINUOUS CURRENT TEST AT AMBIENT CONDITIONS, THE VOLTAGE DROP ACROSS P1 M 79 WAS OUT OF TOLERANCE. INVESTIGATION REVEALED PROBLEM WAS DUE TO PIN-SOCKET MISALIGNMENT PART MATED WITH 27-04998-17. | | | | | | | |
| CORRECTIVE ACTION-CARR ITEM F-3072-SC-1 WAS ISSUED TO FACTORY TO MINIMIZE PIN-SOCKET MISALIGNMENT BY IMPROVING THE R POTTING TECHNIQUE. POTTING JIGS ARE NOW EMPLOYED. (REF. FRR 288A). | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-09-14-213-F SWITCH-POWER CHANGEOVER | FAR 27-08177-3 | 640326 | FACTORY | YES NO M-800 | | 890870 |
| FAILURE MODE-CONTAMINATION. FAILED TO OPERATE WHEN SWITCH STUCK IN EXTERNAL POSITION DUE TO BINDING OF BRAKE TO DRUM RESULTING FROM PLASMA CEMENT ON THE BAND. | | | | | | | |
| CORRECTIVE ACTION-VENDOR INITIATED A MACHINING OPERATION OF THE BRAKE BAND AFTER BONDING. THIS PRECLUDES POSSIBILITY OF BONDING MATERIAL ON FINISHED BRAKE BAND. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 89A2146 RECEPTACLE, UMBILICAL CONNECTOR | UTP-QUAL/PPT 27-04999-17 | 640321 | 60/C | YES YES 017070-1043 | | 890832 |
| FAILURE MODE-FAIL DURING OPERATION. DURING X, Y, AND Z-AXIS VIBRATION (SINE 35 G PEAK) PIN 93 AND 94 WAS INTERMITTENTLY OPEN. ALSO THE SPECIMEN WOULD NOT COMPLETELY EJECT WHEN 22 VDC WAS APPLIED TO THE SOLENOID. DURING THE PROOF CYCLE PIN 93 CENTER CONDUCTOR, 93 SHIELD, 94 SHIELD, AND 95 SHIELD VOLTAGE DROP WAS OUT-OF-TOLERANCE. PART MATED WITH 27-04998-17. | | | | | | | |
| CORRECTIVE ACTION-SPEC 27-04992 REVISED MATED VIBRATION REQUIREMENT FROM SINE TO RANDOM ONLY. NEW PARTS PASSED TEST. (REF. FRR 146A). | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 89A1826-3 DISCONNECT - STAGING, AUTOPILOT | UTP-PRT 7-08347-9 | 640320 | CONVAIR | YES NO 200X-30-3002 | | |
| FAILURE MODE-FAILED DURING OPERATION. DURING Z AXIS TEMP-ALT-VIBRATION TEST (TEMP 225 DEG. F, ALT 10000 FT, VIB. 2 G RMS SINE PLUS 2 G SQUARE PER CPS RANDOM) THE SPECIMEN WOULD NOT EJECT WHEN 188 LBS. OF LANTARD FORCE WAS APPLIED. THE LANTARD FORCE WAS INCREASED TO 210 LBS. AND STILL THE SPECIMEN WOULD NOT EJECT. PART MATED WITH P/N 7-08346-11. | | | | | | | |

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DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF TIME | SITE DIF TIME | PRI OTH | VENDOR NAME VENDOR PART NO | |
|--|--|--------------------------------|--------------------------|------------------|----------------------------------|-------------------------------|--------|
| CORRECTIVE ACTION-NONE. INVESTIGATION OF CLEARANCES AND MATERIALS USED INDICATE THAT THEY ARE ADEQUATE FOR THEIR PURPOSE. PART ORIGINALLY DESIGNED TO SINE ONLY RESMT. PROPOSAL TO REDESIGN PART WAS DISAPPROVED BY E.C.B. 8-11-64, BAS ED ON SATISFACTORY FLIGHT HISTORY. (REF-FRR 1308). | | | | | | | 893674 |
| | | | | | | | 891041 |
| | | | | | | | 890979 |
| ELECTRICAL-A/B POWER DISTRIBUTION | 69A2148 RECEPTACLE, UMBILICAL CONNECTOR | UTP-GUAL/PPT 27-04999-17 | 640320 | 60/C | YES CANNON YES 017069-1043 | | |
| FAILURE MODE-CONTAMINATION. DURING TEMPERATURE SHOCK TEST, THE CURRENT THROUGH THE SOLENOID AT MINUS 30 DEGREES F W AS OUT OF TOLERANCE. ALSO THE VOLTAGE DROP ACROSS PIN 93 WAS OUT OF TOLERANCE. PART IS MATED WITH P/N 27-04998-17. | | | | | | | |
| CORRECTIVE ACTION-REVISION D TO SPEC 27-04992 DELETED THE MAXIMUM CURRENT LIMIT AT MINUS 30 DEG F AND REVISED THE C URRENT LIMITS FOR 77 DEG F. VOLTAGE DROP DISCREPENCY DISAPPEARED WHEN THE CONTACTS WERE CLEANED. /REF/ FRR 146A/. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 69A1926.3 DISCONNECT - STAGING, AUTOPILOT | UTP-PRT 7-08348-11 | 640320 | 60/C | YES AMPHENOL NO 2003-30-9209 | | 890979 |
| FAILURE MODE-FAIL DURING OPERATION. DURING Z-AXIS TEMPERATURE, ALTITUDE, VIBRATION TEST, THE SPECIMEN WOULD NOT EJECT WHEN 160 LBS OF LANTARD FORCE WAS APPLIED. THE LANTARD FORCE WAS INCREASED TO 250 LBS AND STILL THE SPECIMEN WOULD NOT EJECT. PART MATED WITH P/N 7-08347-3. | | | | | | | |
| CORRECTIVE ACTION-NONE. INVESTIGATION OF CLEARANCES AND MATERIALS USED INDICATED THAT THEY ARE ADEQUATE FOR THEIR PURPOSE. PART ORIGINALLY DESIGNED TO SINE ONLY REQUIREMENT. PROPOSAL TO REDESIGN PART WAS DISAPPROVED BY E.C.B. 8-11-64 BASED ON SATISFACTORY FLIGHT HISTORY. REF. FRR 1308. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | LV-A9-14-213-C HARNESS | FAR 27-42748-811 | 640318 | FACTORY | YES 60/C NO | | 890979 |
| FAILURE MODE-STRUCTURAL FAILURE OF INSULATION RESULTING FROM SEVERE BENDING. CIRCUIT NOT INTERRUPTED. | | | | | | | |
| CORRECTIVE ACTION-HARNESS ASSEMBLY REPLACED. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | LV-98-14-214-F SWITCH-POWER CHANGEOVER | FAR 27-08108-801 | 2830 640318 | ETR | YES UNITED CONTROL NO 1277-1A | | |
| FAILURE MODE-CONTAMINATION. FAILED WHEN SWITCH STOPPED IN EXTERNAL POSITION AND COULD NOT BE MOVED TO INTERNAL POSITION AS A RESULT OF CORROSION. SPECIFICATIONS FOR THIS SWITCH DO NOT CALL FOR HERMETIC SEALING. | | | | | | | |

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DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|--|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| CORRECTIVE ACTION-SURVEY OF SWITCHES ACCOMPLISHED ON CERTAIN MISSILES. OTHERS NOT SURVEYED BECAUSE OF PHASEOUT. | | | | | | | 894971 |
| ELECTRICAL-A/B POWER DISTRIBUTION | LV-A9-14-212-F SWITCH-POWER CHANGEOVER | FAR 87-08108-801 | 640311 | FACTORY | YES | UNITED CONTROL NO 1277-1A | 894973 |
| FAILURE MODE-CONTAMINATION. FAILED WHEN SWITCH STOPPED IN INTERMEDIATE POSITION AND COULD NOT BE MOVED TO INTERNAL OR EXTERNAL POSITION AS A RESULT OF CORROSION. SPECIFICATIONS FOR THIS SWITCH DO NOT CALL FOR HERMETIC SEALING. | | | | | | | |
| CORRECTIVE ACTION-SURVEY OF SWITCHES ACCOMPLISHED ON CERTAIN MISSILES. OTHERS NOT SURVEYED BECAUSE OF PHASE OUT. | | | | | | | 893373 |
| ELECTRICAL-A/B POWER DISTRIBUTION | 69A2631.2 JUNCTION BOX-THRUST SECTION | UTP-BLT 69-61030-3 | 640311 | 60/C | YES | 60/C NO | |
| FAILURE MODE-STRUCTURAL. DURING X, Y, AND Z-AXIS RANDOM/SINE VIBRATION-TEMPERATURE-ALTITUDE (BLT LEVEL VIBRATION, Y EMP 100 DEG F-ALT 17M HG) THE SPECIMEN EXHIBITED INTERMITTENT OPEN ON CIRCUIT JAG. CASE TO CHASSIS SCREW FELL OUT, OTHERS WERE FOUND QUITE LOOSE. INVESTIGATION OF INTERMITTENT OPEN REVEALED CAUSE DUE TO BROKEN CONTACT SPRING ON THE CONNECTOR SOCKET JAG WHICH WAS CONSIDERED A RANDOM FAILURE. | | | | | | | |
| CORRECTIVE ACTION-THE INTERMITTENT OPEN WAS A RANDOM FAILURE CAUSED. IT WAS THOUGHT, BY IMPROPER HANDLING, BUT NOT VERIFIED. SURVEY INSTRUCTION S/N 42-64 WAS ISSUED 30 APRIL 1964 TO SURVEY ALL BOXES MANUFACTURED TO DATE FOR LOOSE SCREWS, BACKSHELLS, TERMINAL BOARD NUTS, AND DIMENSIONS. (REF. FRR 190A1). | | | | | | | 892831 |
| ELECTRICAL-A/B POWER DISTRIBUTION | 69A2141.2 LOZ LEVEL PROBE | UTP-PRT 69-43203-3 | 640309 | 60/C | YES | 60/A NO | |
| FAILURE MODE-OPEN (ELECTRICAL). DURING THE PRT, POST NON-OPERATING VIBRATION PROOF CYCLE, BOTH ELEMENT CIRCUITS WERE OPEN. REF. TASK HISTORY 3/NO09. | | | | | | | |
| CORRECTIVE ACTION-REWORK UNIT BY I.R. TO BLUE PRINT AND REINSTATE IN PROOF CYCLE. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 69A1926.1 DISCONNECT - STAGING, AUTOPILOT | UTP-BLT 7-08347-3 | 640304 | 60/C | YES | AMP-HEMOL NO 200K-30-3002 | |
| FAILURE MODE-FAIL DURING OPERATION. DURING THE LANTARD ANGLE FULL TEST, THE SPECIMEN WOULD NOT EJECT WHEN 200 LBS W AS APPLIED AT AN ANGLE OF 10 TO 5 DEGREES. THE ANGLE WAS REDUCED TO ZERO AND THE SPECIMEN EJECTED WITH AN APPLIED FORCE OF 105 LBS. (SPEC IS 25 TO 110 LBS) PART IS MATED WITH 7-06348-11. | | | | | | | |
| CORRECTIVE ACTION-NONE. WITH THE CUMULATIVE EFFECTS OF TESTING, THERE IS REASONABLE DOUBT THAT THE CAUSE OF FAILURE | | | | | | | |

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DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | DATE DIF | DATE DIF | PRI VENDOR NAME | OTH VENDOR PART NO |
|--|--|--------------------------------|---------------------|----------|----------|--------------------|-----------------------|
| COULD BE DETERMINED. PROPOSAL TO REDESIGN PART ON ECP WAS DISAPPROVED 840815 BASED ON SUCCESSFUL FLIGHT HISTORY OF PART (REF. FRR150 A AND B). | | | | | | | |
| 893748 | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 89A1926.1 DISCONNECT - STAGING, AUTOPILOT | UTP-SLT 7-06346-11 | 840304 | 60/C | YES | AMPHENOL | NO 200X-30-5209 |
| FAILURE MODE-FAILED DURING OPERATION. DURING THE LANTARD ANGLE PULL TEST, THE SPECIMEN WOULD NOT EJECT WHEN 200 LBS WAS APPLIED AT AN ANGLE OF 10 AND 5 DEGREES. THE ANGLE WAS REDUCED TO ZERO AND THE SPECIMEN EJECTED WITH AN APPLIED FORCE OF 103 LBS. /SPEC. IS 25 TO 110 LBS/ PART IS MATED WITH 7-06347-5. | | | | | | | |
| CORRECTIVE ACTION-NONE. WITH THE CUMULATIVE EFFECTS OF TESTING, THERE IS REASONABLE DOUBT THAT CAUSE OF FAILURE COULD BE DETERMINED. PROPOSAL TO REDESIGN PART DISAPPROVED BY E.C.B. 8-11-64-BASED ON SUCCESSFUL FLIGHT HISTORY OF PART . REF-FRR 150 A AND B. | | | | | | | |
| 890916 | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 89A1926.1 DISCONNECT - STAGING, AUTOPILOT | UTP-SLT 7-06346-11 | 840228 | 60/C | YES | AMPHENOL | YES 200X-30-5209 |
| FAILURE MODE-OUT OF TOLERANCE. DURING THE PROX CYCLE FOLLOWING THE Z AXIS VIBRATION, OUT-OF-TOLERANCE VOLTAGE DROP MEASUREMENTS WERE RECORDED ON SEVERAL PINS. THIS TEST WAS ACCOMPLISHED WITH SPECIMEN STABILIZED AT 280 DEG. F. TESTING WAS CONTINUED RATHER THAN CONDUCT A FAILURE ANALYSIS AT THIS TIME. PART IS MATED WITH P/N 7-06347-5. THE PART WAS EJECTED AND RE-ENGAGED. AT THIS TIME ACCEPTABLE READINGS WERE OBTAINED. THIS INDICATES THAT (1) POSSIBLY, CONTAMINATES WERE PRESENT ORIGINALLY OR (2) ENGAGEMENTS PRODUCED SUFFICIENT WIRING ACTION TO MEET SPECIFIED CONTACT VOLTAGE DROP TEST (REF-FRR 150B) | | | | | | | |
| CORRECTIVE ACTION-NONE. | | | | | | | |
| 890916 | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 89A2630.2 JUNCTION BOX SCREW | UTP-SLT 89-81016-801 | 840224 | 60/C | YES | 60/C | NO |
| FAILURE MODE-STRUCTURAL. DURING Z-AXIS RANDOM/SINE VIBRATION-TEMPERATURE-ALTITUDE TEST (SLT LEVEL VIBRATION, TEMP 180 DEG F, ALT 1 MM HG) ONE OF THE FOUR MOUNTING SCREWS FOR CONNECTOR J4 BECAME LOOSE AND BOUNCED AROUND INSIDE THE JUNCTION BOX. | | | | | | | |
| CORRECTIVE ACTION-SURVEY INSTRUCTIONS 8/N 42-64 WAS ISSUED 30 APRIL 64 TO SURVEY ALL BOXES MANUFACTURED TO DATE FOR LOOSE MOUNTING SCREWS, TERMINAL BOARD NUTS, BACKSHELLS, AND DIMENSIONS. (REF. FRR 149A). | | | | | | | |
| 893728 | | | | | | | |

GENERAL DYNAMICS
CONVAIR DIVISION

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DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO |
|---|--|--------------------------------|---------------------|------------------|------------|-------------------------------|
| ELECTRICAL-A/B POWER DISTRIBUTION | 89A1926-1 DISCONNECT - STAGING, AUTOPILOT | UTP-SLT 7-08346-11 | 640224 | 60/C | YES | AMPHENOL YES 200X-30-5209 |
| <p>FAILURE MODE-FAIL DURING OPERATION. DURING 2-AXIS RANDOM/SINE VIBRATION-TEMPERATURE-ALTITUDE TEST (SINE 25G RMS, RA NOOM 3 6 SQUARE PER CPS, TEMPERATURE 280 DEGREES F, ALTITUDE 1 MN HG) THE SPECIMEN FAILED TO EJECT WITH AN APPLIED L ANTARD FORCE OF 183.8 LBS. (SPECIFICATION IS 25 TO 110 LBS) A PULL FORCE OF 1100 LBS WAS REQUIRED TO SEPARATE THE MA TIME HALVES. PART MATED WITH 7-08347-5 AND 7-08348-11.</p> | | | | | | |
| <p>CORRECTIVE ACTION-NONE. PART ORIGINALLY DESIGNED TO SINE ONLY REQUIREMENT. PROPOSAL TO REDESIGN DISAPPROVED BY ECB 8-11-64 BASED ON SUCCESSFUL FLIGHT HISTORY OF PART. (REF: FRR 150 B).</p> | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 89A1926-1 DISCONNECT - STAGING, AUTOPILOT | UTP-SLT 7-08347-8 | 640221 | 60/C | YES | AMPHENOL YES 200X-30-5002 |
| <p>FAILURE MODE-STRUCTURAL. DURING Y AXIS RANDOM SINE VIBRATION-TEMPERATURE ALTITUDE TEST, THE SPECIMEN FAILED TO EJECT Y WITH AN APPLIED LANTARD FORCE OF 109 LBS. (SPEC. IS 25 TO 110 LBS.) EXAMINATION REVEALED GALLING BETWEEN MATING MA LUES. PART MATED WITH P/N 7-08348-11.</p> | | | | | | |
| <p>VEHICLE EFFECT-NONE</p> | | | | | | |
| <p>CORRECTIVE ACTION-NONE. PART ORIGINALLY DESIGNED TO SINE ONLY REQUIREMENT. PROPOSAL TO REDESIGN DISAPPROVED BY E.C. 8. 8-11-64 ON BASIS OF SUCCESSFUL FLIGHT HISTORY OF PART. (REF.-FRR150B).</p> | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 89A1926-1 DISCONNECT - STAGING, AUTOPILOT | UTP-SLT 7-08347-5 | 640221 | 60/C | YES | AMPHENOL 200X-30-5002 |
| <p>FAILURE MODE-OUT OF TOLERANCE. DURING THE PROOF CYCLE FOLLOWING Y AXIS VIBRATION, OUT OF TOLERANCE VOLTAGE DROP MEA SURMENTS WERE RECORDED ON SEVERAL PINS BEFORE AND AFTER EJECTION. TESTING WAS CONTINUED RATHER THAN CONDUCT A FAILU RE ANALYSIS AT THIS TIME. PART MATED WITH P/N 7-08348-11. THE PART WAS EJECTED AND RE-ENGAGED. AT THIS TIME ACCEPTAB LE READINGS WERE OBTAINED. THIS INDICATES THAT (1) POSSIBLY, CONTAMINANTS WERE PRESENT ORIGINALLY OR (2) ENGAGEMENTS PRODUCED SUFFICIENT WIPING ACTION TO MEET THE SPECIFIED CONTACT VOLTAGE DROP TEST. (REF-FRR 150B).</p> | | | | | | |
| <p>CORRECTIVE ACTION-NONE.</p> | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 89A1926-1 DISCONNECT - STAGING, AUTOPILOT | UTP-SLT 7-08346-11 | 640221 | 60/C | YES | AMPHENOL YES 200X-30-5209 |
| <p>FAILURE MODE-OUT OF TOLERANCE. DURING THE PROOF CYCLE FOLLOWING Y AXIS VIBRATION, OUT-OF-TOLERANCE VOLTAGE DROP MEA SURMENTS WERE RECORDED ON SEVERAL PINS BEFORE AND AFTER EJECTION. TESTING WAS CONTINUED RATHER THAN CONDUCT A FAILU RE ANALYSIS AT THIS TIME. PART MATED WITH P/N 7-08347-5. THE PART WAS EJECTED AND RE-ENGAGED. AT THIS TIME ACCEPTAB LE READINGS WERE OBTAINED. THIS INDICATES THAT (1) POSSIBLY, CONTAMINANTS WERE PRESENT ORIGINALLY OR (2) ENGAGEMENTS</p> | | | | | | |

GENERAL AMICS
CONVAIR DIVISION

11 JUN 1966

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|--|--|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| PRODUCED SUFFICIENT WEAVING ACTION TO MEET THE SPECIFIED CONTACT VOLTAGE DROP TEST. (REF-FRR1508). | | | | | | | 990981 |
| CORRECTIVE ACTION-NONE. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 69A1926-1 DISCONNECT - STAGING, AUTOPILOT | UTP-3LT 7-08348-11 | 640221 | GO/C | YES | AMPHENOL YES 200X-30-3209 | 990989 |
| FAILURE MODE-OUT OF TOLERANCE. DURING Y-AXIS RANDOM SINE VIBRATION-TEMPERATURE THE SPECIMEN FAILED TO EJECT WITH AN APPLIED LANTARD FORCE OF 209 LBS. (SPEC IS 25 TO 110 LBS) EXAMINATION REVEALED GALLING BETWEEN MATING HALVES. PART MATED WITH P/N 7-08347-5. | | | | | | | |
| CORRECTIVE ACTION-NONE. PART ORIGINALLY DESIGNED TO SINE VIBRATION REQUIREMENT ONLY. PROPOSAL TO REDESIGN DISAPPROVED BY E.C.B. 6-11-64 ON BASES OF SUCCESSFUL FLIGHT HISTORY OF PART (REF. FRR 1508). | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | CT-99-14-032P HARNES | FAR 508397 | 640219 | FACTORY | NO | PHILADELPHIA W NO 1KE | 990931 |
| FAILURE MODE-STRUCTURAL. LONGITUDINAL INSULATION CRACKS IN WIRE. | | | | | | | |
| CORRECTIVE ACTION-INVESTIGATE QUALITY OF WIRE STOCK, REJECT UNACCEPTABLE MATERIAL. UPDATE RECEIVING INSPECTION TO INCLUDE CONCEPT OF GO/C SPECIFICATION 0-75083. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 69A2146 RECEPTACLE, UNIBILICAL CONNECTOR | UTP-61AL/PPT 27-07987-3 | 640219 | GO/C | YES | CANNON YES 017070-1072 | 990930 |
| FAILURE MODE-STRUCTURAL. DURING Z-AXIS VIBRATION (SINE-ONLY 35 G PEAK) FOUR RECEPTACLE FACE TO CASE RETAINING SCREWS BROKE. ALL PINS BEING MONITORED INDICATED INTERMITTENT OR OPEN CONDITION. THE PLUG GUIDE PIN AND FACE SCREWS BECAME LOOSE. THE RECEPTACLE FACE LOCK INSERT BECAME SLIGHTLY PULLED OUT. DURING PROOF CYCLE VOLTAGE DROP ACROSS PINS 2 & NO 86 WERE OUT-OF-TOLERANCE. PART MATED WITH 27-07988-3. DURING X AND Y AXIS VIBRATION THE SPECIMEN AGAIN EXHIBITED OPEN OR INTERMITTENT OPERATION AS WELL AS EXCESSIVE VOLTAGE DROP ACROSS PIN 2. | | | | | | | |
| CORRECTIVE ACTION-THE SCREWS WERE REPLACED AND/OR TIGHTENED AND TEST CONTINUED TO NEXT AXIS VIBRATION. SPECIFICATION W 27-04912 WAS REVISED TO LOWER THE VIBRATION REQUIREMENT TO A MORE REALISTIC LEVEL FOR THE MATED CONDITION. REF. FRR 1667. | | | | | | | |

15 JUN 1966

GENERAL AMICS
CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|--|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| ELECTRICAL-A/B POWER DISTRIBUTION | 69A1929.2 DISTRIBUTION BOX-SCREW | UTP-3LT 60-61050-807 | 640213 | CONVAIR | YES | 60/C | 093075 |
| FAILURE MODE-OPEN ELECTRICAL. THE Y AND Z AXIS RANDOM/ SINE VIBRATION-TEMPERATURE-ALTITUDE TEST (SLT LEVEL VIBRATION N. TEMP. 100 DEG. F. ALT. 1 MM HG) THE TEST SPECIMEN EXHIBITED AN INTERMITTANT OPEN ON CIRCUIT J20. EXAMINATION REVEALED TERMINAL BOARD NUT WAS LOOSE. WHEN THE NUT WAS TIGHTENED ABOUT A HALF TURN IT STILL APPEARED LOOSE AND THE SCREW WAS SHEARED OFF. CONCLUSION-SCREW WAS PREVIOUSLY OVER TORQUED. | | | | | | | |
| CORRECTIVE ACTION-NONE. INSTRUCTION 8/N 42-84 WAS ISSUED TO SURVEY ALL BOXES MANUFACTURED TO DATE FOR LOOSE TERMINAL BOARD NUTS. MOUNTING SCREWS, BACKSHELLS, AND DIMENSIONS. TORQUE VALUES FOR THE TERMINAL BOARD NUTS WERE ADDED TO THE DRAWING. (REF.-FRR 171A) | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 69A1929.1 DISCONNECT - STAGING, AUTOPILOT | UTP-PRT 7-06346-11 | 640212 | 60/C | YES | AMPHENOL MO 200X-30-5209 | 091035 |
| FAILURE MODE-FAIL DURING OPERATION. DURING IMMERSION TEST IN ROCKET FUEL THE O-RING SEAL ELONGATED AND SMELLED. THE PART IS MATED WITH P/N 7-06347-5. | | | | | | | |
| CORRECTIVE ACTION-NONE. PROPOSAL TO REDESIGN THE STAGING DISCONNECT WAS DISAPPROVED BY E.C.B. 8-11-64 BASED ON SUCCESSFUL FLIGHT HISTORY OF PART. THE TEST WAS CONTINUED AFTER REPLACING THE O-RING WITH A NEW ONE. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 69A1928.3 DISCONNECT - STAGING, AUTOPILOT | UTP-PRT 7-06346-11 | 640210 | 60/C | YES | AMPHENOL YES 200X-30-5209 | 091036 |
| FAILURE MODE-OUT OF TOLERANCE. DURING THE PROOF CYCLE FOLLOWING THE TEMPERATURE SHOCK TEST, THE VOLTAGE DROP ACROSS TWO PINS WERE OUT-OF-TOLERANCE. IT WAS NOTICED THAT THE VOLTAGE DROP ACROSS ONE PIN COULD BE VARIED BY FLEXING THE WIRES ATTACHED TO THE SPECIMEN. PART IS MATED WITH P/N 7-06347-5. | | | | | | | |
| CORRECTIVE ACTION-NONE. INVESTIGATION COULD NOT DUPLICATE FAILURE. PROPOSAL TO REDESIGN PART WAS DISAPPROVED BY E.C.B. 8-11-64 BASED ON SUCCESSFUL FLIGHT HISTORY OF PART. (REF. FRR 150B). | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 69A1928.3 DISCONNECT - STAGING, AUTOPILOT | UTP-PRT 7-06347-5 | 640210 | 60/C | YES | AMPHENOL YES 200X-30-5002 | |
| FAILURE MODE-OUT OF TOLERANCE. DURING THE PROOF CYCLE FOLLOWING THE TEMPERATURE SHOCK TEST, THE VOLTAGE DROP ACROSS TWO PINS WERE OUT OF TOLERANCE. IT WAS NOTICED THAT THE VOLTAGE DROP ACROSS ONE PIN COULD BE VARIED BY FLEXING THE WIRES ATTACHED TO THE SPECIMEN. PART IS MATED WITH P/N 7-06346-11. | | | | | | | |

GENERAL DYNAMICS
CONVAIR DIVISION

12 JUN 1961

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTF | VENDOR NAME VENDOR PART NO | |
|---|--|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| CORRECTIVE ACTION-NONE. INVESTIGATION COULD NOT DUPLICATE FAILURE. PROPOSAL TO REDESIGN PART WAS DISAPPROVED BY E-L .B 6-11-64 BASED ON SUCCESSFUL FLIGHT HISTORY OF PART. REF. FRR 150B. | | | | | | | 890811 |
| ELECTRICAL-A/B POWER DISTRIBUTION | 89A1928-1 DISCONNECT - STAGING, AUTOPILOT | UTP-PRT 7-08345-11 | 640209 | 6D/C | YES NO | AMPHENOL MO 200X-30-3509 | 890822 |
| FAILURE MODE-STRUCTURAL. THE O-RING SEAL OF THE PLUG CAME OUT WHILE ATTEMPTING TO MATE THE TEST SPECIMEN FOLLOWING THE HYDRAULIC OIL IMMERSION TEST. IT WAS IMPOSSIBLE TO REPLACE THE O-RING SINCE IT HAD APPARENTLY SWOLLEN. PART IS MATED WITH P/N 7-08347-3. | | | | | | | |
| CORRECTIVE ACTION-NONE. PROPOSAL TO REDESIGN THE DISCONNECT WAS DISAPPROVED BY THE E.C.O. 6-11-64 BASED ON SUCCESSFUL FLIGHT HISTORY OF PART. (REF-FRR 150B) THE O-RING WAS REPLACED WITH A NEW ONE AND THE TEST WAS CONTINUED. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | LV-39-20-298F DEMOCULATOR ASSY. | FAR 7-43444-813 | 640204 | FAC | YES NO | 60/C | 890874 |
| FAILURE MODE-ELECTRICAL OPEN UNIT WAS REJECTED FOR LOW DC VOLTAGE OUTPUT. FAILURE WAS CONFIRMED AS CAUSED BY AN OPEN CIRCUIT BETWEEN TERMINALS C AND B. | | | | | | | |
| CORRECTIVE ACTION-PRODUCTION AND INSPECTION PERSONNEL WERE CAUTIONED IN THE IMPORTANCE OF PROPER SOLDER JOINTS. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 89A2629-2 DISTRIBUTION BOX-B1 P00 | UTP-PAT 89-81030-807 | 640203 | CONVAIR | YES NO | 60/C | 890831 |
| FAILURE MODE-OUT OF TOLERANCE. DURING EXAMINATION OF PRODUCT THE SCREW LOCATION DIMENSION ON THE PANEL MEASURED 0.423 INCHES. (SHOULD BE 0.427 TO 0.447 INCHES). | | | | | | | |
| CORRECTIVE ACTION-SURVEY INSTRUCTION 8/N 42-64 SURVEYED ALL BOXES MANUFACTURED TO DATE FOR DIMENSIONS, LOOSE SCREWS, TERMINAL BOARD NUTS, AND BACK SHELLS. (REF FRR 171A). TESTING CONTINUED. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 89A2629-2 DISTRIBUTION BOX-B1 P00 | UTP-PAT 89-81030-807 | 640203 | 60/C | YES NO | 60/C | 891733 |
| FAILURE MODE-OUT OF TOLERANCE. DURING EXAMINATION OF PRODUCT THE DIMENSION FROM THE CENTER OF THE MOUNTING HOLE TO THE EDGE OF THE BRACKET MEASURED 0.35 INCHES. (SHOULD BE 0.37-0.43 INCHES). | | | | | | | |
| CORRECTIVE ACTION-SURVEY INSTRUCTIONS 8/N 42-64 SURVEYED ALL BOXES MANUFACTURED TO DATE FOR DIMENSIONS, LOOSE SCREW S, TERMINAL BOARD NUTS, AND BACKSHELLS. REF (FRR 171A) TEST CONTINUED. | | | | | | | |

GENERAL DYNAMICS
CONVAIR DIVISION

13 JUN 1966

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO |
|--|--|--------------------------------|---------------------|------------------|----------------------------------|-------------------------------|
| ELECTRICAL-A/B POWER DISTRIBUTION | 59A2630.2 JUNCTION BOX NUT | UTP-PRT 59-61016-801 | 840202 | 60/C | YES 60/C NO | 893374 |
| FAILURE MODE-OPEN ELECTRICAL. DURING TEMPERATURE HUMIDITY TEST, THE HARD WIRE CIRCUITS FROM J76 TO J8A AND J76 TO J8B EXHIBITED AN OPEN CIRCUIT CONDITION FOR 15 MINUTES AFTER WHICH TIME THE CIRCUITS BEGAN TO FUNCTION PROPERLY AGAIN. INVESTIGATION REVEALED A LOOSE NUT ON TERMINAL NO. 1 OF TERMINAL BOARD NO. 8 RESULTING IN POOR CONTACT. THE NUT WAS TIGHTENED ONE AND ONE HALF TURNS AND CIRCUIT CONTINUITY WAS RESTORED. | | | | | | |
| CORRECTIVE ACTION-SURVEY INSTRUCTIONS 5/N 42-64 WAS ISSUED 30 APRIL 64 TO SURVEY ALL BOXES MANUFACTURED TO DATE FOR LOOSE TERMINAL BOARD NUTS, MOUNTING SCREWS, BACKSHELLS AND DIMENSIONS. TORQUE VALUES WERE ADDED TO THE APPLICABLE DRAWINGS TO INSURE THAT ALL TERMINAL NUTS ARE TORQUED PROPERLY AND IDENTIFIED BY THE APPLICATION OF TORQUE PAINT. (REF. FRR 149A). | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 59A2630.2 JUNCTION BOX NUT | UTP-SLT 59-61016-801 | 840202 | 60/C | YES 60/C NO | 893373 |
| FAILURE MODE-OPEN, ELECTRICAL. DURING X-AXIS RANDOM/SINE VIBRATION-TEMPERATURE-ALTITUDE TEST (SLT LEVEL VIBRATION-T EMP 100 DEG F, ALT 1 MM HG) THE TEST SPECIMEN EXHIBITED AN OPEN CIRCUIT CONDITION BETWEEN J8A TO J76 AND J8B TO J76. INVESTIGATION REVEALED A LOOSE NUT ON TERMINAL NO. 1 OF TERMINAL BOARD NO. 8 RESULTING IN POOR CONTACT. THE NUT WAS TIGHTENED ONE AND ONE HALF TURNS AND CIRCUIT CONTINUITY WAS RESTORED. | | | | | | |
| CORRECTIVE ACTION-SURVEY INSTRUCTIONS 5/N 42-64 WAS ISSUED 30 APRIL 64 TO SURVEY ALL BOXES MANUFACTURED TO DATE FOR LOOSE TERMINAL BOARD NUTS, MOUNTING SCREWS, BACKSHELLS, AND DIMENSIONS. TORQUE VALUES WERE ADDED TO THE APPLICABLE DRAWINGS AND THE APPLICATION OF TORQUE PAINT TO INSURE ALL TERMINAL NUTS ARE PROPERLY TORQUED. (REF. FRR 149A). | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 59A1928.1 DISCONNECT - STAGING, AUTOPILOT | UTP-PRT 7-06348-11 | 840202 | 60/C | YES AMPHENOL YES 200K-30-3208 | 890808 |
| FAILURE MODE-OUT OF TOLERANCE. DURING RAIN TEST ALL INSULATION RESISTANCE AND HYPOT MEASUREMENTS WERE OUT OF TOLERANCE. FOLLOWING RAIN TEST A LANTARD FORCE OF 270LBS. WAS REQUIRED TO EJECT PART. (SPEC. IS 25 TO 110LBS.) PART MATED WITH P/N 7-03347-5. OUT OF TOLERANCES RESULT OF MOISURE PATHS BETWEEN CONTACT -SOLDER CONNECTIONS DUE TO INCORRECT WIRING METHODS. | | | | | | |
| CORRECTIVE ACTION-COMMON THERMO FIT SLEEVING HAD BEEN PLACED ON EACH PAIR OF CURRENT AND SENSING LEADS, RATHER THAN INDIVIDUAL SLEEVING ON EACH LEAD. ANOTHER CORRECTLY WIRED SPECIMEN WAS SUBJECTED TO THE RAIN TEST AND PASSED. EJECT ION PROBLEM ATTRIBUTED TO ADDED REQUIREMENT OF SINE/VIBRATION ACCOMPISHED PRIOR TO RAIN TEST. PART ORIGINALLY DESIGNED TO SINE ONLY. PROPOSAL TO REDESIGN PART WAS DISAPPROVED BY E.C.B. 6-11-64 BASED ON SUCCESSFUL FLIGHT TEST ONLY (REF. FRR 150B). | | | | | | |

15 JUN 1966

GENERAL ANICS
CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|---|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| ELECTRICAL-A/B POWER DISTRIBUTION | 69A1926.1 DISCONNECT - STAGING, AUTOPILOT | UTP-PRT 7-08346-3 | 640202 | 60/C | YES | AMPHENOL YES 200X-30-3002 | 990909 |
| FAILURE MODE-OUT OF TOLERANCE. DURING RAIN TEST ALL INSULATION RESISTANCE AND HYPOT MEASUREMENTS WERE OUT OF TOLERANCE. FOLLOWING RAIN TEST A LANTARD FORCE OF 170LBS. WAS REQUIRED TO EJECT PART. (SPEC. IS 25 TO 110LBS.) PART MATED WITH P/N 7-08346-11 OUT OF TOLERANCES RESULT OF MOISTURE PATHS BETWEEN CONTACT SOLDER CONNECTIONS DUE TO INCORRECT WIRING METHODS. | | | | | | | |
| CORRECTIVE ACTION-COMMON THERMO FIT SLEEVING HAD BEEN PLACED ON EACH PAIR OF CURRENT AND SENSING LEADS, RATHER THAN INDIVIDUAL SLEEVING ON EACH LEAD. ANOTHER CORRECTLY WIRED SPECIMEN WAS SUBJECTED TO THE RAIN TEST AND PASSED. EJECT ION PROBLEM ATTRIBUTED TO ADDED REQUIREMENT OF SINE/RANDOM VIBRATION ACCOMPLISHED PRIOR TO RAIN TEST. PART ORIGINALLY DESIGNED TO SINE ONLY. PROPOSAL TO REDESIGN PART WAS DISAPPROVED BY E.C.D. 8-11-64 BASED ON SUCCESSFUL FLIGHT HIST CKY (REF. FRR 1308). | | | | | | | |
| ELECTRICAL A/B POWER DISTRIBUTION | 69A2630.2 JUNCTION BOX-BE PCO | UTP-PAT 69-61016-801 | 640129 | 60/C | YES | 60/C NO | 993993 |
| FAILURE MODE-OUT OF TOLERANCE. DURING EXAMINATION OF PRODUCT THE OVERALL LENGTH OF THE SPECIMEN MEASURED 11.648 INCHES. (SPEC IS 11.47 TO 11.53 INCHES). | | | | | | | |
| CORRECTIVE ACTION-TEST CONTINUED. DIMENSIONAL OUT OF TOLERANCE DOES NOT AFFECT ELECTRICAL PERFORMANCE. QUALITY ASSURANCE WAS REQUESTED TO SURVEY HARDWARE IN STOCK FOR PROPER DIMENSIONS PER DESIGN MEMO 64-661-7-15 DATED 1-24-64. 8-C . SURVEY INSTRUCTIONS 9/N 42-64 ISSUED 30 APRIL 64. TO SURVEY ALL BOXES MANUFACTURED TO DATE FOR DIMENSIONS, LOOSE TERMINAL BOARD NUTS, MOUNTING SCREWS, AND BACKSHELL. (REF. FRR 149A). | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | CT-99-14-031P UMBILICAL CONNECTOR | FAR 27-08171-949 | 640127 | FACTORY | YES | GRAY-HULEGUARD NO | 993952 |
| FAILURE MODE-STRUCTURAL. BENT INSULATOR SLEEVING CAUSED RECEPACLE REJECT. | | | | | | | |
| CORRECTIVE ACTION-CAUTIONED 60/C FACTORY PERSONNEL TO IMPROVE ASSEMBLY TECHNIQUES. REQUESTED VENDOR TO ENLARGE HOLE. THIS WOULD IMPROVE THE CLOSE TOLERANCE INVOLVED. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 69A2142.1 STILLWELL ASSEMBLY, OXIDIZER LEVEL | UTP-PRT 69-43228-1 | 640121 | 60/C | YES | 60/C NO 69-43228-1 | |
| FAILURE MODE-SHORT (ELECT). DURING PRT X AXIS VIBRATION AT APPROX. 60 CPS ELEMENTS A AND B OF THE UPPER TRANSDUCER SHORTED TOGETHER. REF. 8/N 008 T.M. NO.7. | | | | | | | |

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GENERAL MANICS
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DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI DIF | VENDOR NAME VENDOR PART NO | |
|--|---|--------------------------------|---------------------|------------------|----------------------------|-------------------------------|--------|
| | | | | | | | 092379 |
| | CORRECTIVE ACTION-REWORK UNIT TO BLUEPRINT REQUIREMENTS AND REINSTATE IN TEST. REDUCE THE VIBRATION REQUIREMENTS FR OM 10 G TO 6 G. REF. IR NO. 942976, RTFN NR F-41133T AND FRR NO. FR 634-2-126. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 99A2631-2 JUNCTION BOX-THRUST SECTION | UTP-PAT 89-61030-3 | 840117 | 60/C | YES 60/C NO | | 093594 |
| FAILURE MODE-OUT OF TOLERANCE. DURING EXAMINATION OF PRODUCT, STENCIL SOZUS WAS MISSING FROM LEFT HAND SIDE OF BOX. THE MISSING STENCIL WAS OMITTED DUE TO MISUNDERSTANDING OF DRAWING REQUIREMENT. | | | | | | | |
| CORRECTIVE ACTION-THE DRAWING CALLOUT WAS CLARIFIED TO THE SHOP AND INSPECTION. THE STENCIL WAS ADDED TO THE UNIT. (REF. FRR 133) TESTING WAS CONTINUED. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 99A2631-2 JUNCTION BOX-THRUST SECTION | UTP-PAT 89-61030-3 | 840117 | 60/C | YES 60/C NO | | 093595 |
| FAILURE MODE-OUT OF SPECIFICATION. DURING EXAMINATION OF PRODUCT THE SPECIMEN WEIGHED 8.139-/10 OZ. MAXIMUM ALLOWAB LE WEIGHT IS 8.5 LBS. THE OVER WEIGHT CONDITION WAS CAUSED BY EXCESS POTTING MATERIAL. THE POTTING MOLDS DID NOT COM FORM TO DIMENSIONS CALLED OUT IN THE DRAWING. KPM CORRECTIVE ACTION-THE POTTING MOLD WAS REMOVED TO REMOVE EXCESS PO TTING MATERIAL. (REF. FRR 133) TESTING WAS CONTINUED. | | | | | | | |
| CORRECTIVE ACTION-THE POTTING MOLD WAS REMOVED TO REMOVE EXCESS POTTING MATERIAL. (REF. FRR 133) TESTING WAS CONTI NUED. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 99A2793-1 LOE LEVEL PROBE | UTP-PRT 89-43210-1 | 840113 | 60/C | YES 60/C NO 89-43210-1 | | 093847 |
| FAILURE MODE-SHORT (ELECT). DURING PRT 13PT, ROOM AMBIENT, ELEMENT A SHORTED TO CASE. MINIMUM INSULATION RESISTANCE REQUIRED IS 1 MEGOHM. REF S/N 001 T.N. NO 1. | | | | | | | |
| CORRECTIVE ACTION-RETURN PART TO FACTORY FOR REWORK TO S/P REQUIREMENTS, AND REINSTATE IN TEST. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 99-2834 FUEL CONTROL UNIT | UTP-EQUAL/PPT 27-34237-19 | 840113 | 60/C | YES ACOUSTICA NO CUS1-2 | | |
| FAILURE MODE-ELECTRICAL OPEN. DURING LIFE TEST, AT THE END OF 236 HOUR (2100 HOUR REQUIRED), THE UNIT FAILED TO OPE RATE IN A PROOF CYCLE AT 88KC. IT SUBSEQUENTLY FAILED AT 77KC AND 88KC. UNIT COULD BE MADE TO OPERATE TEMPORARILY BY TAPPING. LOOSE CONNECTION IS INDICATED. | | | | | | | |

GENERAL MANICS
CONVAIR DIVISION

13 JUN 1966

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | SITE TIME DIP | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|---|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| CORRECTIVE ACTION-REPLACE TRANSFORMER AND RESUME TEST. THE TRANSFORMER INTERNAL WIRING WAS POORLY SOLDERED. VENDOR TO CORRECT DEFICIENCY. | | | | | | | 990973 |
| ELECTRICAL-A/B POWER DISTRIBUTION | 69A2146 RECEPTACLE, UMBILICAL CONNECTOR | UTP-QUAL/PPT 27-04999-7 | 640108 | 60/C | YES | CANNON NO 017070-1046 | 990902 |
| FAILURE MODE-CONTAMINATION. DURING 19PT HYPOT LEAKAGE OCCURRED AT 1800 VAC ON PIN 93 CENTER CONDUCTOR TO SHIELD. ALSO EXCESSIVE CONTACT DROP OCCURRED ON PIN 1. | | | | | | | |
| CORRECTIVE ACTION-FACTORY RETERMINATED CONTACTS. 19PT WAS REPEATED AND PIN 1 STILL EXHIBITED EXCESSIVE CONTACT DROP. TESTING PROCEEDED SUBSTITUTING PIN 2 FOR PIN 1 FOR MONITORING PURPOSES. SUBSEQUENT INVESTIGATION ON PIN 1 REVEALED CONTAMINATED CONTACT. MICROSCOPIC ANALYSIS REVEALED CONTAMINATION MAY BE CAUSED BY SAME MATERIAL USED TO SEAL FACE PLATE AND BACKING PLATE TOGETHER. THIS APPEARED TO BE PERMATEX. VENDOR ADVISED THAT GREATER CARE BE GIVEN TO THE PROBLEM OF PREVENTING CONTAMINATION. (REF. FRR 113A). | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | LV-98-14-208-F HARNESS | FAR 27-62703-835 | 199D 640103 | ETR | YES | 60/C NO | 990130 |
| FAILURE MODE-OPEN IN HARNESS SUPPLYING POWER TO ONE OF THE VERNIER START SOLENOID VALVES. WIRE BROKEN WHERE IT EMERGED FROM CONNECTOR BACKSHELL AND INDICATED FAILURE DUE TO EXCESSIVE FLEXING AND FATIGUE. | | | | | | | |
| CORRECTIVE ACTION-A LETTER WAS ISSUED REQUESTING THAT HANDLING OF POTTED PLUG CONNECTIONS BE HELD TO A MINIMUM. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | SWITCH-CHANGEOVER | FAR 27-08108-801 | 199-D 640103 | ETR | NO | KINETICS NO M-160-4 | 990485 |
| FAILURE MODE-REPORTED FAILED DURING OPERATION WHEN INVERTER STOPPED RUNNING DURING BOOSTER FACT TEST AND ATTEMPTS TO RE-CYCLE TO 7 MINUS FIVE MINUTES WHEN A UMBILICAL DID NOT EJECT. SUBSEQUENT ACTIONS RESULTED IN STOPPAGE OF INVERTER DUE TO LOSS OF EXTERNAL POWER. | | | | | | | |
| CORRECTIVE ACTION-APPROPRIATE CAUTION NOTES WERE ADDED TO APPLICABLE BOOSTER FACT PROCEDURES. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 69A2146 RECEPTACLE, UMBILICAL CONNECTOR | UTP-QUAL/PPT 27-04999-17 | 631227 | 60/C | YES | CANNON NO 017070-1043 | |
| FAILURE MODE-OUT OF TOLERANCE. DURING INITIAL PROOF CYCLE HYPOT TEST, OUT-OF-TOLERANCE READINGS WERE RECORDED BETWEEN ALL PINS BEING MONITORED AND THE SHELL AND ALSO BETWEEN CENTER CONDUCTOR OF CONTACT 93 AND THE SHELL. PART MATED WITH 27-04999-17. | | | | | | | |

GENERAL DYNAMICS
CONVAIR DIVISION

15 JUN 1966

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|--------------------------------------|---|--------------------------------|---------------------|------------------|------------------------------|-------------------------------|--------|
| | | | | | | | 890840 |
| | CORRECTIVE ACTION-ARCING ON ALL BUT COAX DISAPPEARED AFTER CONNECTOR DISASSEMBLY AND REASSEMBLY, AND APPEARED TO BE ASSOCIATED WITH A FLOATING POTENTIAL AT HIGH AC VOLTAGE LEVELS. ARCING OF COAX CONTACT CENTER CONDUCTOR TO SHIELD W AS DUE TO POOR WIRE TERMINATION METHOD. VENDOR AND CPT WERE ADVISED OF FAILURE TO PREVENT RECURRENCE OF PROBLEM. (RE F. PER103). | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 89A2146 RECEPTACLE, UMBILICAL CONNECTOR | UTP-QUAL/PPT 27-07996-3 | 631219 | 60/C | YES CANNON NO D17089-1083 | | 891204 |
| | FAILURE MODE-OUT OF SPECIFICATION. DURING INVESTIGATION OF FAILED UMBILICAL CONNECTOR IT WAS NOTED THAT THE ETCHING OF THE CONNECTOR WIRES WERE INADEQUATE FOR PROPER POTTING ADHESION. | | | | | | |
| | CORRECTIVE ACTION-THE VENDOR PROPERLY RE-ETCHED THE CONNECTOR WIRES. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 89A2146 RECEPTACLE, UMBILICAL CONNECTOR | UTP-QUAL/PPT 27-07996-3 | 631219 | 60/C | YES CANNON NO D17089-1083 | | 891203 |
| | FAILURE MODE-OUT OF SPECIFICATION. THE UMBILICAL CONNECTOR REPORTEDLY FAILED DURING SATISFACTORY PERFORMANCE TEST W WHEN AN EXCESSIVE VOLTAGE DROP WAS OBSERVED ON CONNECTOR PINS USED FOR THERMOCOUPLE CONTACTS WHEN 20 AMPS. OF CURRENT WAS APPLIED. | | | | | | |
| | CORRECTIVE ACTION-THERMOCOUPLE OUTPUTS HAVE LOW CURRENT RANGE. THE 20 AMP REQUIREMENT WAS DELETED FROM SPECIFICATION N 27-04992, SINCE THE REQUIREMENT WAS NOT REALISTIC. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 89C2612-2 SWITCH-POWER CHANGEOVER | UTP-ETT 27-06177-3 | 631203 | 60/C | YES KINETICS NO N-600 | | 892807 |
| | FAILURE MODE-FAIL DURING OPERATION. DURING ETT THE SWITCH WAS UNABLE TO TRANSFER FROM INTERNAL TO EXTERNAL OR FROM EXTERNAL TO INTERNAL. THE SPECIMEN HAD BEEN SUBJECTED TO 100 SWITCHING CYCLES. SPEC CALLS FOR 500 ASSEMBLY CYCLES WITHOUT FAILURE. VENDOR ANALYSIS WAS THE BRAKE COIL SHORTED DUE TO MISAPPLICATION OF CONTROL POWER TO BOTH MOTOR CONTROL CIRCUITS (INTERNAL AND EXTERNAL). | | | | | | |
| | CORRECTIVE ACTION-IMPROVEMENT DESIGN OF THE POWER CHANGEOVER SWITCH WAS PROPOSED PER ECP 7870 BUT WAS DISAPPROVED BY THE CCB. IN VIEW OF PREVIOUS TESTING, PAST EXPERIENCE AND FLIGHT PERFORMANCE RECORD, THE PRESENT UNITS ARE ACCEPTABLE FOR CONTINUED USE. (REF- FMR 079.) | | | | | | |
| | | | | | | | |

GENERAL DYNAMICS
CONVAIR DIVISION

13 JUN 1966

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF TIME DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|--|--------------------------------|------------------------------|------------------|--------------------------------------|-------------------------------|--|
| ELECTRICAL-A/B POWER DISTRIBUTION | 27A850 PLUG ASSEMBLY, ELECT. FOR TANK 000 27-04983-1/27-0498 R | U/P-PET 2-1 | 931129 | 60/C | YES ON MARK COUPLI NO NC8 7088 | 091845 | |
| FAILURE MODE-OPEN (ELECT). INTERMITTENT OPEN WAS NOTED DURING X-AXIS VIBRATION AT 1750 CPS AND REMAINDER OF SWEEP. Y AND Z AXIS VIBRATION TESTS WERE SATISFACTORY. DISASSEMBLY SHOWED PIN NO. 2 SLIGHTLY CHARRED AS IF ARCING HAD OCCURRED. | | | | | | | |
| CORRECTIVE ACTION-NONE. THE PROBLEM IS CLASSIFIED AS A POSSIBLE HUMAN ERROR. PLUG MUST BE DISASSEMBLED TO BE WIRED UP. THE PLUG IS ACTIVE DURING PROPELLANT LOADING ONLY, BUT MUST MAINTAIN STRUCTURAL INTEGRITY. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 60A83-1237/P8-LO-01-ONCE HARNESS | FLIGHT | 1260 931127 | 36A 293.4 | NO NO | 098496 | |
| FAILURE MODE-FAIL TO OPERATE AT PRESCRIBED TIME. CENTAUR PLUG 8600/P8 FAILED TO EJECT AT SEPARATION. UMBILICAL PLUG FROZE IN PLACE. | | | | | | | |
| SYSTEM EFFECT-NONE. HARNESS AND/OR PLUG PHYSICALLY SEPARATED DURING RETROCKET FIRING SEQUENCE. | | | | | | | |
| VEHICLE EFFECT-LOSS OF VEHICLE STABILITY. ABNORMAL PITCH AND YAW ACCELERATIONS WERE IMPARTED TO THE VEHICLE DURING THE RETROCKET FIRING SEQUENCE. | | | | | | | |
| CORRECTIVE ACTION-CENTAUR RECEPTACLE INSULATED WITH STA-FOAM ALSO MOUNTED ON FIBERGLASS. LANYARD REDESIGNED AND DUAL LANYARD PROVIDED. ELECTRICAL RELEASE MECHANISM AND ACTUATOR REDESIGNED. WARM GND DIRECTED ON PLUG AND ACTUATOR DURING COUNTDOWN. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | LV-90-14-204-F CONNECTOR ELECT | FAR 7-08348-11 | 350-D 831127 | WTR | | 094860 | |
| FAILURE MODE-CONTAMINATION DUE TO EXTENDED USE IN A HIGHLY SALINE ATMOSPHERE OR FORMATION OF CHLORIDES RESULTING FROM HEAT AND RESIN FLUX. | | | | | | | |
| CORRECTIVE ACTION-NONE-FURTHER ACTION WAS SUSPENDED ON THIS PROBLEM BECAUSE OF CONTRACT TERMINATION. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-98-14-202-F SWITCH-CHANGEOVER | FAR 7-01722-3 | 931122 | FACTORY | YES KINETICS NO M-172-4 | | |
| FAILURE MODE-ELECTRICAL SHORT. SWITCH MOTOR FAILED OPEN DURING CHECKOUT IN TEST LABORATORY WHEN FIELD WINDINGS SHORTED AND A BRUSH LEAD OPENED. CAUSE OF FAILURE NOT DETERMINED BUT POSSIBLE FROM CONTINUOUS CYCLING WITHOUT BEING ALLOWED TO COOL. | | | | | | | |

19 JUN 1966

GENERAL DYNAMICS
CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VEHICLE NAME VEHICLE PART NO |
|---|---|--------------------------------|---------------------|------------------|------------|---------------------------------|
| CORRECTIVE ACTION-PERSONNEL INVOLVED WITH CHECKOUT OF THE CHANGE/COVER SWITCHES WERE ADVISED OF THE ALLOWABLE DUTY CYCLE. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | | | | | | |
| | 69-2034 FUEL CONTROL UNIT | UTP-GUAL/PPT 27-04237-13 | 631122 | 60/C | YES NO | YES ACOUSTICA NO CUS1-2 |
| FAILURE MODE-ELECTRICAL OPEN. AFTER THE VACUUM RUN OF 3.44 INCHES HG, THE UNIT FAILED TO MEET WET-TO-DRY RESPONSE TIME OF 100 MILLI-SECOND. THE UNIT WAS AT -30 DEGREES F. THE TRANSFORMER INTERNAL WIRING TO THE EXTERNAL PIN WAS POORLY SOLDERED. THE POTTING MATERIAL ABOVE THE INTERNAL WIRING WAS FULL OF VOIDS. | | | | | | |
| CORRECTIVE ACTION-REPLACE TRANSFORMER AND RESUME TEST. VENDOR TO CORRECT DEFICIENCY. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | | | | | | |
| | LV-99-20-290-F DEMULATOR ASSEMBLY | FAR 7-43444-813 | 631115 | FACTORY | YES NO | |
| FAILURE MODE-OPEN (ELEC) UNIT WAS REJECTED FOR LOW VOLTAGE OUTPUT. FAILURE WAS CONFIRMED AS CAUSED BY AN OPEN CIRCUIT BETWEEN TRANSISTOR Q-301 AND TRANSFORMER T-301. | | | | | | |
| CORRECTIVE ACTION-PRODUCTION PERSONNEL WERE INSTRUCTED IN PROPER SOLDERING TECHNIQUES AND INSPECTION PROCEDURES TO PRECLUDE REOCCURRENCE OF THIS PROBLEM. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | | | | | | |
| | CT-98-14-022P MAIN MISSILE POWER CHANGE/COVER SWIT 7-01722-3 CH | FAR | 631111 | ETR | YES NO | YES KINETICS |
| FAILURE MODE-FAILED TO OPERATE AT PRESCRIBED TIME BY FAILING TO TRANSFER FROM EXTERNAL TO INTERNAL. | | | | | | |
| CORRECTIVE ACTION-RECOMMENDED PART USE STUDY, REDESIGN TO SUIT USE, RETEST PRESENT STOCK IN LOW TEMPERATURE AND USE LATEST CONFIGURATION DESIGN. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | | | | | | |
| | 69A2031.1 JUNCTION BOX-THRUST SECTION | UTP-GUAL/PPT 69-61030-3 | 631106 | 60/C | YES NO | YES 60/C |
| FAILURE MODE-OUT OF SPECIFICATION. DURING EXAMINATION OF PRODUCT THE SPECIMEN WEIGHED 8 LB 9-3/16 OZ. MAXIMUM ALLOWABLE WEIGHT IS 8.9 LBS. THE OVER WEIGHT CONDITION WAS CAUSED BY EXCESS POTTING MATERIAL. THE POTTING MOLDS DID NOT CONFORM TO THE DIMENSIONS CALLED OUT IN THE DRAWING. | | | | | | |
| CORRECTIVE ACTION-THE POTTING MOLD WAS REMOVED NOVEMBER 63 TO REMOVE EXCESS POTTING MATERIAL. (REF. PAR 153). TESTING WAS CONTINUED. | | | | | | |

GENERAL AMICS
CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM | TEST/REPORT NUMBER | VEHICLE | DATE | TIME | DATE | TIME | DATE | TIME | VENDOR NAME |
|---|--|------------------------------|--------|------|------|------|------|------|----------------|
| 300-SYSTEM | FAILED COMPONENT NAME | DATE | TIME | DATE | TIME | DATE | TIME | DATE | VENDOR PART NO |
| ELECTRICAL-A/B POWER DISTRIBUTION | 6942831.1 JUNCTION BOX-THRUST SECTION | UTP-DUAL/PPT 80-9103D-3 | 431100 | 60/C | NO | 60/C | NO | | |
| FAILURE MODE-OUT OF TOLERANCE. DURING EXAMINATION OF PRODUCT THE DIMENSION LOCATING THE STENCIL IN ONE DIRECTION MEASURED 1.92 INCHES. SHOULD BE 2.03 TO 2.09 INCHES. | | | | | | | | | |
| CORRECTIVE ACTION-THE DRAWING WAS REVISED TO CALL-OUT A ONE DECIMAL PLACE DIMENSION. FABRICATION DEPARTMENT AND INSPECTION WERE INSTRUCTED TO ADHERE TO SPACING DIMENSIONS FOR LOCATION OF STENCILS. (REF. PAR 155). TESTING WAS CONTINUED. | | | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 6942829.1 DISTRIBUTION BOX-81 POD | UTP-DUAL/PPT 80-9103D-801 | 631107 | 60/C | YES | 60/C | NO | | |
| FAILURE MODE-OUT OF TOLERANCE. DURING EXAMINATION OF PRODUCT THE DIMENSIONS BETWEEN THE SPECIMEN MOUNTING HOLES MEASURED 17.33 INCHES (SHOULD BE 17.290-17.310 INCHES) AND 8.975 INCHES (SHOULD BE 8.990-9.010 INCHES). DISCREPANCY WAS A RESULT OF INADEQUATE LAYOUT OF HOLE PATTERN ON THE TOOLING FIXTURE. | | | | | | | | | |
| CORRECTIVE ACTION-THE TOOLING FIXTURE WAS REQUISITIONED TO PROPERLY LOCATE THE HOLES. BOXES IN STOCK WERE SURVEYED TO DETERMINE IF HOLE LOCATION IS WITHIN TOLERANCE. MEMO 64-661-7-15 DATED 24 JAN. 1984 REQUESTED SURVEY. (REF PAR 111) TEST CONTINUED. | | | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | CT-98-14-028P HARNESS | FAR 55-64506-837 | 1280 | ETR | YES | 60/C | NO | | |
| FAILURE MODE-ELECTRICAL SHORT CIRCUIT WAS FOUND IN A SPLICE OF A NON-SHIELDED AND SHIELDED CABLE. (SHIELDING WAS CRIMPED IN SPLICE BARREL). | | | | | | | | | |
| CORRECTIVE ACTION-RECOMMEND IMPROVED QUALITY CONTROL. | | | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | CT-98-04-113P HARNESS | FAR 55-41001-835 | 1280 | ETR | YES | 60/C | NO | | |
| FAILURE MODE-SHORT (ELECT). DURING FAILURE ANALYSIS OF A FLIGHT CONTROL DISCREPANCY, A GROUNDWIRE WIRE SPLICE WAS DISCOVERED IN THE MISSILE HARNESS. | | | | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | | | | |

GENERAL DYNAMICS
CONVAIR DIVISION

13 JUN 1968

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | DATE TIME | DIAGNOSTIC FAC | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|--|-----------------------------------|---------------------|--------------|-------------------|------------|-------------------------------|--------|
| ELECTRICAL-A/B POWER DISTRIBUTION | SLV-99-20-278F LIQUID-OXYGEN LEVEL CONTROL | FAR 27-43021-3 | 831029 | FAC | YES | NO | HALL/CRAFTERS | 093667 |
| FAILURE MODE-ELECTRICAL OPEN. FAILURE WAS CONFIRMED AS CAUSED BY TWO ELECTRICALLY OPEN DIODES, U1, CR2. | | | | | | | | |
| CORRECTIVE ACTION-VENDOR ELECTRICAL TEST PRACTICES WERE REVISED TO PREVENT POSSIBLE SHORTING OF THESE DIODES. | | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | LV-99-20-275-F CAPACITOR | FAR 7-04340 | 831023 | FAC | YES | NO | JOHANSON MFG. | 093647 |
| FAILURE MODE-ELECTRICAL SHORT. UNIT WAS REJECTED FOR INTERMITTENT ELECTRICAL SHORT. FAILURE WAS CONFIRMED AS CAUSED BY INADEQUATE INSULATION. INSULATION RESISTANCE WAS DEGRADED THROUGH EXTENSIVE ADJUSTMENTS. | | | | | | | | |
| CORRECTIVE ACTION-NONE. FIRST REPORTED FAILURE. CAUSE OF FAILURE CONSIDERED TO BE EXTENSIVE HANDLING AND ADJUSTMENT | | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | DA983/L3-4MO-01-224 POWER CHANGEOVER SWITCH | COMPOSITE-PRO/DPL 27-08108-801 | 224D 831019 | WTR | YES | NO | | 097237 |
| FAILURE MODE-FAIL TO OPERATE AT PRESCRIBED TIME. AC VOLTAGE INDICATION LOST DUE TO SLOW POWER CHANGEOVER SWITCH OPERATION. | | | | | | | | |
| SYSTEM EFFECT-LOSS OF AC VOLTAGE INDICATION. SHUTDOWN OF MP8 TO 800N. | | | | | | | | |
| VEHICLE EFFECT-COMMIT SEQUENCE AND COUNTDOWN ABORTED. | | | | | | | | |
| CORRECTIVE ACTION-POWER CHANGEOVER SWITCH WAS REPLACED. | | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | LV-90-14-201-F SWITCH-CHANGEOVER | FAR 27-08108-801 | 831019 | WTR | NO | NO | KINETICS M-160-4 | 093613 |
| FAILURE MODE-ERRATIC OPERATION. INDICATOR CIRCUIT AND CONTACTS SLOW TO OPERATE. FAILURE NOT CONFIRMED DURING EXTENSIVE ELECTRICAL AND ENVIRONMENTAL TESTS. | | | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | | | |

15 JUN 1986

GENERAL MANICS
CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM | TEST/REPORT NUMBER | DATE DATA SOURCE | VEHICLE | SITE | PRI | VEHICLE NAME |
|---|--|---------------------|----------------|----------|-----------|----------------|
| SUB-SYSTEM | FAILED COMPONENT NAME | PART NUMBER | DATE OF | TIME DIF | OTH | VENDOR PART NO |
| ELECTRICAL-A/B POWER DISTRIBUTION | NZ-9D-20-289F CABLING/ELECTRICAL | FAR 27-00751-699 | 2820 631010 | WTR | YES NO | 993499 |
| FAILURE MODE-OUT OF SPECIFICATION. FAILURE WAS CONFIRMED AS CAUSED BY CROSS-WIRED 100 AND 90 PCT PROBES. THIS FAILURE CAUSED PREMATURE CLOSURE OF THE BOILOFF VALVE. | | | | | | |
| CORRECTIVE ACTION-INSPECTION WILL REQUIRE THAT FUTURE INSTALLED WIRING BE VISUALLY TRACED BEFORE HOOK UP. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | FTAB231/PS-4CO-08-197 UMBILICAL | COMPOSITE-J FACT | 1970 630930 | 13 | NO NO | 994293 |
| FAILURE MODE-FAIL TO OPERATE AT PRESCRIBED TIME. UMBILICAL P1003 REQUIRED MECHANICAL EJECTION. APPARENT CAUSE WAS MECHANICAL BINDING. HAD BALL LOCKS IN PLACE OF TANG LOCKS INSTALLED FOR TESTING. | | | | | | |
| SYSTEM EFFECT-IMPROPER DISCRETE SIGNALS. | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | |
| CORRECTIVE ACTION-BALL LOCKS REPLACED BY TANG LOCKS. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | SP-A9-20-284-F HARNESS | FAR 27-43016-23 | 2850 630926 | FAC | YES NO | 996035 |
| FAILURE MODE-ERRATIC OPERATION. HARNESS WAS REJECTED FOR INTERMITTENT OPERATION. FAILURE WAS CONFIRMED AND WAS CAUSED BY A FAULTY ELECTRICAL CONNECTOR. | | | | | | |
| CORRECTIVE ACTION-NONE. PRODUCTION AND INSPECTION PERSONNEL WERE ADVISED OF THE FAILURE. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | FTAB249/PS-4CO-03-197 SWITCH-CHANGEOVER | COMPOSITE-B FACT | 1970 630926 | 13 | YES NO | 994293 |
| FAILURE MODE-OUT OF TOLERANCE. ON EXTERNAL POWER ES1V, 400 CYCLE AC PHASE A, INDICATED 112 VOLTS WHILE PANEL METER READ 114.0. SWITCHING TO INTERNAL, ES1V ROSE TO 114.4. VOLTAGE DROP ACROSS CHANGE-OVER SWITCH WAS DETERMINED TO BE NORMAL. PREVIOUS TESTING HAD SHOWN SIMILAR DISCREPANCIES. | | | | | | |
| SYSTEM EFFECT-NONE. | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | |

15 JUN 1966

GENERAL MANICS
CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | SITE TIME DIP | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|---|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| ELECTRICAL-A/B POWER DISTRIBUTION | 99C2834 FUEL CONTROL UNIT | UTP-8UAL/PPT 27-04237-13 | 630823 | 60/C | YES NO | ACOUSTICA CUI-2 | 990979 |
| FAILURE MODE-SHORT ELECTRICAL DURING FIRST PROOF CYCLE, NO OUTPUT COULD BE OBTAINED FROM PIN 3. RELAY WITHIN UNIT C AM BE HEARD TO OPERATE. FAILURE ANALYSIS RESULTS SHOW INDICATIONS OF CIRCUIT OVERLOAD. IT WAS CAUSED BY GROUNDING OF THE VALVE COMMAND OUTPUT TERMINAL OF THE CONTROL UNIT (PIN 3). | | | | | | | |
| CORRECTIVE ACTION-A NEW UNIT WILL BE OBTAINED TO CONTINUE PPT. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | SP-98-14-200-F SWITCH-POWER CHANGEOVER | FAR 27-08106-801 | 263D 830916 | ETR | YES NO | KINETICS 1070106 | 994872 |
| FAILURE MODE-FAILED DURING OPERATION WHEN SWITCHING FROM EXTERNAL TO INTERNAL. DUE TO ERRATIC CONTACT FOR INVERTER. INVERTER STOPPED ON INTERNAL POWER AND SWITCH WAS SWITCHED BACK TO EXTERNAL POWER RESULTING IN STARTING CURRENT BEING 6 DRAWN THROUGH CONTACT AND EXCEEDING DESIGN LIMITS. | | | | | | | |
| CORRECTIVE ACTION-TEST PERSONNEL WERE ADVISED THAT THE FUNCTION OF THE SWITCH IS TO TRANSFER POWER FROM EQUAL SOURCES AND THAT IT SHOULD NOT BE USED AS AN ON-OFF SWITCH. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-49-14-197-F SWITCH-CHANGEOVER | FAR 27-08177-3 | 48E 830910 | FACTORY | YES NO | KINETICS M600-16 | 993810 |
| FAILURE MODE-OPEN ELECTRICAL. FAILURE OF PINS TO MAKE CONTACT WHEN SWITCH TRANSFERRED FROM EXTERNAL TO INTERNAL. | | | | | | | |
| CORRECTIVE ACTION-VENDOR REQUESTED TO REVIEW AND IMPROVE ASSEMBLY AND ADJUSTMENT TECHNIQUES. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | SP-90-20-236F AMPLIFIER | FAR 27-43016-23 | 212D 830904 | 2-3 | YES NO | | 993889 |
| FAILURE MODE-SHORT (ELECTRICAL)- UNIT WAS REJECTED FOR FAILURE TO CONTROL THE PU VALVE. FAILURE WAS CONFIRMED AS CAUSED BY A DEFECTIVE CONVERTER AMPLIFIER RESULTING FROM A SHORTED ZENER DIODE. | | | | | | | |
| CORRECTIVE ACTION-PRODUCTION FACILITIES ARE BEING EQUIPPED FOR MONITORING TRANSIENT VOLTAGES. VENDOR AND 60/C ARE EVALUATING DESIGN CHANGES TO INCREASE POWER RATING OF FAILED UNIT. | | | | | | | |

GENERAL HARNICS
CONVAIR DIVISION

15 JUN 1968

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF TIME | SEIC DIF TIME | PRI DIF TIME | VENDOR NAME VENDOR PART NO | |
|--|---|--------------------------------|--------------------------|------------------|-----------------|-------------------------------|--------|
| ELECTRICAL-A/B POWER DISTRIBUTION | 3P-A9-04-4399-F HARNISS | FAR 27-04501-077 | 135D 830820 | FACTORY | YES | 40/C NO | 093074 |
| FAILURE MODE-OUT OF TOLERANCE. MISSILE HARNISS INCORRECT FOR 55-41001-051 AUTOPILOT PROGRAMMER. FAILURE CONFIRMED DUE TO 27-04501-077 HARNISS INSTALLED WHERE 27-04501-099 IS CORRECT. FAILURE CAUSED BY LATE ENGINEERING RELEASE. | | | | | | | |
| CORRECTIVE ACTION-60/C UPDATED HARNISS TO CORRECT 27-04501-099 CONFIGURATION. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 60A 83-0890 CABLING, ELECTRICAL | COMPOSITE-FRD/DPL | 142D 630614 | WTR | YES NO | | 093101 |
| FAILURE MODE-PREATURE OPERATION 99.5 PERCENT PROBE ACTIVATE INDICATION RECEIVED 4.0 SECONDS AFTER 90 PERCENT. PROB LE4 CAUSED BY 99.5 PCT PROBE BEING WIRED TO 95 PCT PROBE. | | | | | | | |
| SYSTEM EFFECT-OPERATION STOPS PREMATURELY. FUEL LOAD STOPPED PRIOR TO FUEL LOAD COMPLETE. | | | | | | | |
| VEHICLE EFFECT-COUNTDOWN DELAYED. | | | | | | | |
| CORRECTIVE ACTION-WIRING CORRECTED. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 3P-99-14-195-F HARNISS | FAR 27-01064-013 | 227D 630724 | FACTORY | YES | 60/C NO | 093734 |
| FAILURE MODE-SHORT (ELECT.) REPORTED DURING DIELECTRIC TEST FOR FINAL CHECKOUT. SHIELD WAS BROKEN INSIDE CONNECTOR AND FRAGMENTS WERE CLINGING TO CONNECTOR INNER SURFACE. BREAKING CAUSED BY IMPROPER ASSEMBLY. | | | | | | | |
| CORRECTIVE ACTION-SHOP ASSEMBLY AND INSPECTION PERSONNEL ADVISED TO FOLLOW SPECIFICATIONS FOR HARNISS ASSEMBLIES OF THIS TYPE. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-99-14-196-F HARNISS | FAR 27-02317-003 | 233-D 630710 | FACTORY | YES | BENDIX NO | 093010 |
| FAILURE MODE-OPEN DUE TO BREAKS IN WIRES RESULTING FROM IMPROPER ASSEMBLY AND SOLDERING. | | | | | | | |
| CORRECTIVE ACTION-APPROPRIATE FACTORY PERSONNEL WERE INFORMED OF THE FAULTY SOLDER CONNECTIONS AND IMPROPER HANDLING DURING POTTING. | | | | | | | |

GENERAL NAMICS
CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | SITE TIME DIP | PRI OTH | VENDOR NAME VENDOR PART NO |
|---|---|--------------------------------|---------------------|------------------|------------|-------------------------------|
| ELECTRICAL-A/B POWER DISTRIBUTION | A-99-20-230F FUEL PROBE ASSY. | FAR 27-72433-803 | 630715 | FACTORY | YES NO | |
| FAILURE MODE-ELECTRICAL SHORT. FAILURE WAS CONFIRMED AS CAUSED BY SHORTED CIRCUIT BETWEEN PRIMARY AND SECONDARY WINDINGS OF SENSOR TRANSFORMER. | | | | | | |
| CORRECTIVE ACTION-NONE. PREVIOUS DESIGN CHANGES AND PROCESS IMPROVEMENTS BY THE VENDOR IS CONSIDERED CORRECTIVE. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | SP-90-20-280F ISOLATION AMPLIFIER | FAR 27-43016-16 | 730 630711 | WTR | YES NO | 630715 |
| FAILURE MODE-SHORT ELECTRICAL. UNIT WAS REJECTED DURING BENCH TEST FOR NO OUTPUT OF ERROR DETECTOR. FAILURE WAS CONFIRMED AS A SHORTED CAPACITOR IN THE ISOLATION AMPLIFIER. | | | | | | |
| CORRECTIVE ACTION-QUALITY CONTROL REVIEWED ASSEMBLY PROCEDURES. PRODUCTION PERSONNEL WERE MADE AWARE OF THIS PROBLEM. ALL PROCEDURES WERE CLEARLY DEFINED. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | SP-90-04-4331-F HARNESS | FAR 92-40003-016 | 201D 630615 | WTR | YES NO | CANON C3106E-148-78 |
| FAILURE MODE-OPEN (ELECT). TWO AUTOPILOT HARNESS CONNECTORS FAILED WITH INTERMITTENT OPENS AT PIN B (P701 AND P703). BOTH FAILURES CONFIRMED DUE TO BROKEN WIRES AT PIN B. FAILURE CAUSED BY MISHANDLING. | | | | | | |
| CORRECTIVE ACTION-60/C REINSTRUCTED ALL FACTORY AND SITE PERSONNEL IN THE PROPER MATING AND DEMATING OF CONNECTORS. THE AFOREMENTIONED OPERATION IS STRICTLY LIMITED TO PROPERLY TRAINED AND CERTIFIED PERSONNEL. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | SP-99-14-190-F CONNECTOR-PIN | FAR 7-36392-3 | 232D 630613 | FACTORY | YES NO | CANON D17070-0846 |
| FAILURE MODE-ERRATIC OPERATION DUE TO INTERMITTENT OPEN OF PIN 75 IN AN UNBILICAL RECEPTACLE. RESULTED FROM EXCESSIVE AMOUNT OF PERMATEX BEING APPLIED BETWEEN THE FACE PLATES AND SQUEEZING ONTO THE PINS. ALSO PRIMER MATERIAL ON PIN | | | | | | |
| CORRECTIVE ACTION-MANUFACTURING WAS REQUESTED TO PROTECT PINS WHEN APPLYING PRIMER. VENDOR HAD PREVIOUSLY BEEN REQUESTED TO REDUCE AMOUNT OF PERMATEX BETWEEN FACE PLATES. | | | | | | |

15 JUN 1966

GENERAL DYNAMICS
CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-A118C LINE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | 81YE TIME DIF | PRI OIM | VENDOR NAME VENDOR PART NO | |
|---|---|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| ELECTRICAL-A/B POWER DISTRIBUTION | SP-AB-14-185-F SWITCH-CHANGEOVER | FAP 27-02101-801 | 930812 | FACTORY | NO | KINETICS NO M160-4 | 994310 |
| FAILURE MODE-FAIL DURING OPERATION. PROBLEM WAS CREATED BY TRANSIENTS FROM GSE 25 VDC SUPPLY. | | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | AX83-0003-126C/7C-CO-01-0502-003 | COMPOSITE-FACTORY | 126D 130808 | | NO NO | | 999202 |
| FAILURE MODE-FAIL DURING OPERATION. MIDWESTERN RECORDER NO. 2 CHANNEL 8 (SUSTAINER CUTOFF), 15 (OPEN VENT VALVES), AND 17 (CLOSE VENT VALVES) INDICATED MOMENTARY ACTIVATION AT POWER CHANGEOVER FROM EXTERNAL TO INTERNAL. THIS CONDITION WAS CAUSED BY THE MOMENTARY INTERRUPTION OF THE 400 CPS POWER WHEN CHANGING FROM AGE POWER TO THE AIRBORNE INVERTER. | | | | | | | |
| SYSTEM EFFECT-IMPROPER DISCRETE SIGNALS. | | | | | | | |
| VEHICLE EFFECT-COMPOSITE DELAYED. POST-COMPOSITE TESTING REQUIRED. | | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-99-14-188-F HARNESS | FAR 27-61802-013 | 930804 | FACTORY | YES NO | 50/C | 999763 |
| FAILURE MODE-ELECTRICAL SHORT OF OUTER SHIELD TO INNER SHIELD OF TRIAXIAL CABLE. | | | | | | | |
| CORRECTIVE ACTION-INITIATED IMPROVED PRODUCTION QUALITY CONTROL AND INSPECTION OF CABLE ASSEMBLY. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | SP-80-20-243-F LOX PROBE TRANSDUCER | FAR 27-43185-017 | 139D 930322 | WTR | NO NO | 50/C | 998702 |
| FAILURE MODE-OPEN (ELECT). FILAMENT WAS BURNED OPEN AT ONE POINT. ELEMENT WIRE ENDS WERE TIPPED WITH SMALL BALLS OF ELEMENT MATERIAL, INDICATING THE WIRE HAD BURNED RATHER THAN BROKEN. FAILURE WAS PROBABLY CAUSED BY A VOLTAGE SURGE ORIGINATING IN THE ASSOCIATED CIRCUITRY. | | | | | | | |
| CORRECTIVE ACTION-THIS WAS A SECONDARY FAILURE. NO CORRECTIVE ACTION CAN BE TAKEN AS THE ASSOCIATED EQUIPMENT WAS NOT RETURNED FOR ANALYSIS. THIS MAY HAVE BEEN RE-ADJUSTED AT THE SITE TO A LOWER POWER LEVEL TO CORRECT THE PROBLEM. | | | | | | | |

13 JUN 1936

GENERAL UNICS
CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO |
|---|---|--------------------------------|---------------------|------------------|------------|-------------------------------|
| ELECTRICAL-A/B POWER DISTRIBUTION | A-99-14-188-C HARNESS | FAR 27-11443-807 | 24E 630317 | FACTORY | YES NO | 603613 |
| FAILURE MODE-FAIL DURING OPERATION. REPORTED FAILURE DURING FINAL CHECKOUT. ITEM NOT RECEIVED FOR ANALYSIS. | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-90-14-187-C HARNESS | FAR 27-61865-839 | 3-F 630316 | WTR | YES NO | 603764 |
| FAILURE MODE-ELECTRICAL SHORT TO SHIELD OF WIRE IN CIRCUIT OF REENTRY VEHICLE SEPERATION SWITCH. | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. HARNESS WAS NOT RECEIVED FOR ANALYSIS. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | CT-99-14-004C MAIN MISSILE POWER CHANGEOVER SWIT CH | F R 53-06111-1 | 630314 | FACTORY | YES NO | 603791 |
| FAILURE MODE-ELECTRICAL SHORT CIRCUITING WAS EVIDENT WHEN A REPORTED (EXCESSIVE CURRENT AND HEAT OCCURRED). | | | | | | |
| CORRECTIVE ACTION-UNKNOWN, SINCE THIS PART WAS FAILURE ANALYZED AND REPAIRED AT THE VENDOR. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | NZ-90-14-186-F SWITCH-CHANGEOVER | FAR 27-06177-3 | 198-D 630314 | WTR | YES NO | 603763 |
| FAILURE MODE-FAIL DURING OPERATION. OPERATION STOPPED PREMATURELY WHILE TRANSFERING FROM EXTERNAL TO INTERNAL POSITION. | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. A TXV WAS SENT TO CONCERNED PERSONNEL AT WTR OUTLINING PRECAUTIONS TO BE TAKEN WHEN CYCLING THE SWITCH TO PREVENT MISAPPLICATION AND RESULTANT FAILURE. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | AX63-0003-75D/PC-4CO-02-0008-003 UNBILICAL | COMPOSITE-FACTORY | 73D 630313 | | YES NO | 603613 |
| FAILURE MODE-ELECTRICAL OPEN. THE DECODER DISCRETE RELAYS WERE NOT RECORDED ON THE GUIDANCE SANSORN RECORDING. SATISFACTORY TRANSMISSION AND RECEPTION OF THE COMMANDS WERE VERIFIED BY FLIGHT CONTROL AND TELEMETRY. | | | | | | |
| SYSTEM EFFECT-NONE. | | | | | | |

GENERAL DYNAMICS
CONVAIR DIVISION

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DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO |
|--|---|--------------------------------|---------------------|------------------|------------|-------------------------------|
| VEHICLE EFFECT-COMPOSITE DELAYED. POST-COMPOSITE TESTING WAS REQUIRED. | | | | | | |
| CORRECTIVE ACTION-A LOOSE GUIDANCE UNBILICAL (J1004) WAS READJUSTED PER MP829.05. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-99-14-180-F HARNESS-CONNECTOR | FAR 27-11440-1 | 630513 | FACTORY | YES NO | 60/C |
| FAILURE MODE-ELECTRICAL OPEN. WIRE BROKEN AT PLUG RESULTING FROM IMPROPER SOLDERING. | | | | | | |
| CORRECTIVE ACTION-ALL PERSONNEL CONCERNED WITH ASSEMBLY WERE CAUTIONED TO USE HEAT SINKS DURING ASSEMBLY AND PROPER PROCEDURES PER APPLICABLE M.P.S. WERE POSTED AT EACH ASSEMBLY STATION. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | SP-9D-20-229-F LOX LEVEL TRANSDUCER | FAR 27-43165-849 | 190D 630511 | WTR | NO NO | 60/C |
| FAILURE MODE-OPEN ELECTRICAL. NOT CONFIRMED. THE REPORTED TEMPORARY OPEN CIRCUIT INDICATION WAS LATER FOUND TO BE DUE TO A LOOSE CONNECTION IN THE PROPELLANT LOADING CONTROL UNIT. | | | | | | |
| CORRECTIVE ACTION-NONE REQUIRED. THIS UNIT DID NOT FAIL. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | SP-9D-20-229-F LOX LEVEL TRANSDUCER | FAR 27-43165-847 | 190D 630511 | WTR | NO NO | 60/C |
| FAILURE MODE-OPEN ELECTRICAL. NOT CONFIRMED. THE REPORTED TEMPORARY OPEN CIRCUIT INDICATION WAS LATER FOUND TO BE DUE TO A LOOSE CONNECTION IN THE PROPELLANT LOADING CONTROL UNIT. | | | | | | |
| CORRECTIVE ACTION-NONE REQUIRED. THIS UNIT DID NOT FAIL. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | SP-9D-20-229-F LOX LEVEL TRANSDUCER | FAR 27-43165-815 | 190D 630511 | WTR | NO NO | 60/C |
| FAILURE MODE-OPEN ELECTRICAL. NOT CONFIRMED. THE REPORTED TEMPORARY OPEN CIRCUIT INDICATION WAS LATER FOUND TO BE A LOOSE GROUND CONNECTION IN THE PROPELLANT LOADING CONTROL UNIT. | | | | | | |
| CORRECTIVE ACTION-NONE REQUIRED. THIS UNIT DID NOT FAIL. | | | | | | |

GENERAL DYNAMICS
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DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PHI OTH | VENDOR NAME VENDOR PART NO | |
|---|---|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| ELECTRICAL-A/B POWER DISTRIBUTION | SP-90-20-220-F LOX LEVEL TRANSDUCER | FAR 27-43165-817 | 19UD 830511 | WTR | NO NO | NO 60/C | 998706 |
| FAILURE MODE-OPEN ELECTRICAL. NOT CONFIRMED. THE REPORTED FAILURE WAS LATER DISCLOSED TO BE A LOOSE GROUND CONNECTION IN THE PROPELLANT LOADING CONTROL UNIT. | | | | | | | |
| CORRECTIVE ACTION-THERE WAS NO FAILURE OF THIS UNIT. NO CORRECTIVE ACTION REQUIRED. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 99-20-230F DEMULATOR DIODE | FAR 7-43444-813 | 630509 | FACTORY | YES NO | | 998190 |
| FAILURE MODE-OPEN (ELECT). DURING MANUFACTURING TESTING PER EOP 330-139 PAR. 5.10.1 A READING OF MINUS 10.24 VOLTS WAS OBTAINED. ALLOWABLE IS 8.1 TO 9.1 VOLTS. ZENER DIODE POSSIBLY FAILED TO AN OPEN CONDITION DURING VIBRATION. DEPO YTING RESTORED UNIT TO WORKING CONDITION. | | | | | | | |
| CORRECTIVE ACTION-NONE TAKEN SINCE EXACT CAUSE COULD NOT BE DETERMINED. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 90-20-230C COAX-CONNECTOR | FAR | 630429 | WTR | YES NO | | 998064 |
| FAILURE MODE-OUT OF TOLERANCE. OUT OF TOLERANCE READING DURING BENCH TESTER PROCEDURE 27-94932. TEST POINT 4 READ 15 VOLTS POSITIVE-ALLOWABLE IS 5 VOLTS. THE CAUSE WAS FOUND TO BE A BROKEN COAXIAL CONNECTOR. | | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | HG-99-04-4259F HARNESS | FAR 27-41356 | 630426 | FACTORY | 60/C | | 998297 |
| FAILURE MODE-OPEN ELECTRICAL. HARNESS WAS REJECTED FOR OPEN CIRCUITS. DEFECT WAS DISCOVERED WHEN SYRO CAN FAILED TEST. DEFECTS WERE CAUSED BY MISSING JUMPER WIRE. WIRING CONNECTOR ON WRONG WIRE AND A FAULTY WIRING CONNECTION. HARNESS WOULD NOT PASS ITS SUBASSEMBLY TEST. | | | | | | | |
| CORRECTIVE ACTION-HARNESS DESIGN WAS MODIFIED. AN ERROR IN THE TEST SET WHICH PERMITTED A MISSING WIRE TO GO UNDETECTED WAS CORRECTED. ADDITIONAL INSPECTION AND CONTROL POINTS WERE ESTABLISHED. CRIMPING PROCEDURES WERE ADDED TO THE CURRICULUM OF THE SOLDER SCHOOL. | | | | | | | |

GENERAL DYNAMICS
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DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO |
|---|---|----------------------------------|---------------------|------------------|---------------------------|-------------------------------|
| ELECTRICAL-A/B POWER DISTRIBUTION | P4-4CO-04-130 HARNESS | COMPOSITE-J FACT 27-61759-959 | 1300 630425 | 14 | YES NO | 999740 |
| FAILURE MODE-OPEN (ELEC). THE PITCH DISPLACEMENT GYRO DID NOT RESPOND TO PITCH STEERING COMMANDS FROM THE DECODER. DUE TO AN OPEN IN PLUG 5A2P7. | | | | | | |
| SYSTEM EFFECT-IMPROPER ANALOG SIGNALS. | | | | | | |
| VEHICLE EFFECT-COMPOSITE RESCHEDULED. | | | | | | |
| CORRECTIVE ACTION-REPLACED PLUG 5A2P7 AND ASSOCIATED HARNESS FROM DECODER TO PERMANENT SPLICE AREA AT STATION 1130. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A463-0012/P4-4CO-04-130 HARNESS | COMPOSITE-J FACT | 1300 630425 | 14 | YES NO | 994031 |
| FAILURE MODE-OPEN (ELEC). WIRE IMPROPERLY SOLDERED TO PIN A OF PLUG 5A2P7 AT DECODER. | | | | | | |
| SYSTEM EFFECT-IMPROPER ANALOG SIGNALS. PITCH COMMAND SIGNALS WERE NOT TRANSMITTED ACROSS PLUG TO GYRO. | | | | | | |
| VEHICLE EFFECT-COMPOSITE DELAYED HARNESS WAS REPOSITIONED TO EFFECT CONTINUITY ACROSS PIN A AND TEST WAS COMPLETED | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | SP-90-04-4281F HARNESS | FAR 27-61907-933-01 | 1390 630417 | WTR | YES NO | 995238 |
| FAILURE MODE-OUT OF SPECIFICATION. THE HARNESS SPLICE WAS REJECTED BECAUSE NO WIRE STRANDS WERE VISIBLE IN WINDOW O F THE CONNECTOR AND BECAUSE LOOSE STRAND WAS OBSERVED AT THE SINGLE WIRE END OF THE SPLICE. DISCREPANCIES WERE DUE T O UNSATISFACTORY INSTALLATION OF THE SPLICE. | | | | | | |
| CORRECTIVE ACTION-NONE. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | LOCAL ETR REPORT/P4-4CO-02-130 SWITCH-CHANGEOVER | COMPOSITE-B FACT 27-08106-801 | 1300 630417 | 14 -60 | YES KINETICS NO M190-4 | |
| FAILURE MODE-FAIL DURING OPERATION. WHEN MISSILE POWER WAS SWITCHED TO INTERNAL, PHASE A VOLTAGE TO GUIDANCE WAS LO ST. | | | | | | |
| SYSTEM EFFECT-OPERATION STOPS PREMATURELY. PHASE A VOLTAGE WAS NOT SUPPLIED TO THE GUIDANCE SYSTEM WHEN SWITCH WAS IN THE INTERNAL POSITION. | | | | | | |
| VEHICLE EFFECT-COMPOSITE ABORTED. | | | | | | |

GENERAL NAMICS
CONVAIR DIVISION

15 JUN 1966

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | VEHICLE DATE DIF | VEHICLE TIME DIF | PRI DIF | VENDOR NAME VENDOR PART NO |
|--|--|---------------------|---------------------|------------|-------------------------------|
| CORRECTIVE ACTION-REPLACED SWITCH. (PAR 98-14-179). | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | PA63-0012/PA-4CO-02-130 CHANGEOVER SWITCH | 1300 030417 | 14 -80 | YES NO | KINETICS M160-4 |
| 27-06108-801 | | | | | |
| FAILURE MODE-OPEN (ELECT). DURING B FACT, PHASE A POWER LOST TO GUIDANCE SYSTEM AT CHANGEOVER TO INTERNAL. CAUSED BY LOW-TEMPERATURE-SENSITIVE GREASE ON SWITCH CONTACTS ACTING AS INSULATOR. | | | | | |
| SYSTEM EFFECT-ERRATIC OPERATION. SEIZURE INSULATION ON CONTACTS RESULTED IN LOSS OF PHASE A POWER AT CHANGEOVER TO INTERNAL. | | | | | |
| VEHICLE EFFECT-COMPOSITE ABORTED AND RE-SCHEDULED. | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | PA-4CO-02-130 SWITCH-CHANGEOVER | 1300 030417 | 14 -80 | YES NO | |
| FAILURE MODE-FAIL DURING OPERATION. AT POWER CHANGEOVER TO INTERNAL PHASE A VOLTAGE TO THE GUIDANCE SYSTEM WAS LOST BECAUSE OF AN ERRATIC POWER CHANGEOVER SWITCH. | | | | | |
| SYSTEM EFFECT-ERRATIC OPERATION. | | | | | |
| VEHICLE EFFECT-COMPOSITE ABORTED. | | | | | |
| CORRECTIVE ACTION-POWER CHANGEOVER SWITCH WAS REPLACED. GUIDANCE CANISTERS WERE REPLACED BECAUSE OF POSSIBLE DAMAGE. | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | PA-4CO-01-130 CONNECTOR/WIRE | 1300 030409 | 14 | YES NO | 60/C |
| 27-61759-829 | | | | | |
| FAILURE MODE-FAIL TO OPERATE AT PRESCRIBED TIME. PITCH DISPLACEMENT GYRO EXPERIENCED A 1.0 SECOND DELAY BEFORE RESPONDING TO PITCH STEERING COMMANDS DUE TO A DEFECTIVE CONNECTOR. | | | | | |
| SYSTEM EFFECT-IMPROPER ANALOG SIGNALS. | | | | | |
| VEHICLE EFFECT-NONE. | | | | | |
| CORRECTIVE ACTION-PROBLEM NOT NOTED UNTIL 22 APRIL 63. ON TEST PA-4CO-04-130, PITCH GYRO FAILED TO RESPOND AT ALL (24 APRIL 63). AT THIS TIME, PLUG 9A2PT AND ASSOCIATED HARNESS WAS REPLACED. (PAR 98-12-004) | | | | | |

GENERAL DYNAMICS
CONVAIR DIVISION

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DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO |
|---|---|--------------------------------|---------------------|------------------|------------|-------------------------------|
| 340-SYSTEM | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | SP-A9-20-219-F DEMODULATOR | FAR 27-43018-13 | 197D 830408 | FACTORY | NO | NO |
| FAILURE MODE-ELECTRICAL OPEN. COMPUTER WOULD NOT CONTROL VALVE ANGLE. CAUSE TRACED TO TRANSISTOR Q-8 AND ZENER DIODE CR-3 BURNED OPEN. COULD BE CAUSED BY MARGINAL DESIGN OR TRANSIENT VOLTAGE IN CONVERTER AMPLIFIER BUILT BY CRESCENT ENG. | | | | | | |
| CORRECTIVE ACTION-ANSWER TO VCAR 4311-03 STATES TRANSISTOR Q-8 REPLACED WITH HIGHER VOLTAGE AND POWER RATING. 60/C WILL INSTALL TRANSIENT MONITORING EQUIPMENT. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-98-20-223-F DEMODULATOR TRANSISTOR | FAR 7-43444-815 | 201D 830303 | FACTORY | NO | NO |
| FAILURE MODE-ELECTRICAL SHORT-FAILURE TRACED TO SHORTED TRANSISTORS IN DEMOD. CAUSE BY EXCESSIVE VOLTAGE APPLICATION. | | | | | | |
| CORRECTIVE ACTION-NONE. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A9-20-210F TRANSFORMER WIRE | FAR | 130-D 830228 | FACTORY | YES | NO |
| FAILURE MODE-OPEN (ELECT). BROKEN WIRE AT TERMINAL 3 OF TRANSFORMER T-101. CAUSED BY MISHANDLING. PROBABLY DAMAGED AS IT WAS BEING REPLACED IN THE CANISTER AFTER ADJUSTMENT OF POTENTIOMETER N-507. | | | | | | |
| CORRECTIVE ACTION-TLR 33298 WAS WRITTEN TO T AND O PLANNING FOR USE OF A DUMMY SHELL TO COVER THE MATCHED SETS DURING CHECKOUT. TLR 79010 WAS WRITTEN TO PROVIDE THE FIELD WITH A DUMMY SHELL WITH THREE HOLES TO ALLOW ADJUSTMENT OF THE POTENTIOMETERS. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | HC-99-14-170-P HARNESS | FAR 27-62745-819 | 130-D 830227 | FACTORY | YES | 60/C NO |
| FAILURE MODE-OPEN (ELECT) IN CABLE BETWEEN VERNIER ENGINE NO. 1 PITCH-ROLL ACTUATOR SERVO CYLINDER CONNECTOR AND THE MAIN HARNESS RESULTING FROM BEND OF SPLICE AND FREEDOM TO FLEX FROM VIBRATION AND HANDLING. | | | | | | |
| CORRECTIVE ACTION-RECOMMENDATION TO (A) SPLICE WIRES IN SECTION OF HARNESS NOT SUBJECT TO BENDING (B) FIRMLY SECURE ALL SPLICES BY AFFIXING TO AREA NOT SUBJECT TO FLEXING (C) SURVEY VERNIER ENGINE HARNESS ASSEMBLIES. | | | | | | |

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GENERAL JANICS
CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRE OTH | VENDOR NAME VENDOR PART NO | |
|---|---|--------------------------------|---------------------|------------------|------------|---------------------------------|--------|
| ELECTRICAL-A/B POWER DISTRIBUTION | MS-99-04-4130-P HARNES | FAR 27-62745-081 | 1300 630223 | FACTORY | YES NO | | 094407 |
| FAILURE MODE-STRUCTURAL: VERNIER ENGINE 2 WENT HARD OVER TO THE LEFT DUE TO A BROKEN WIRE SPLICE IN THE HARNES ASSEMBLY. ANALYSIS DETERMINED THAT THE FAILURE OCCURRED BECAUSE THE WIRE FLEXED EXCESSIVELY WHERE IT ENTERED THE INSULATION BARREL OF THE SPLICE. | | | | | | | |
| CORRECTIVE ACTION-RECOMMENDED THAT THE MISSILE ELECTRICAL DESIGN GROUP TAKE ACTION TO: (A) PREVENT SPLICING IN HARNES SECTION WHICH IS FLEXED, (B) REQUIRE ALL SPLICES AND 3 INCHES OF WIRE ON EACH END OF SPLICE TO BE FIRMLY SUPPORTED, AND (C) SURVEY VERNIER ENGINE HARNESSES FOR CONFORMANCE TO RECOMMENDATIONS (A) AND (B). | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-98-14-189-F ELECTRICAL RECEPTACLE | FAR 7-06345-9 | 197-D 630227 | FACTORY | YES NO | YES AMPHEMOL NO 200X-30-3004 | 090641 |
| FAILURE MODE-ERRATIC OPERATION-INTERMITTANT CONNECTION IN THE AUTOPILOT STAGING PLUG AFFECTED OPERATION OF THE AUTOPILOT. | | | | | | | |
| CORRECTIVE ACTION-FACTORY PERSONNEL CAUTIONED TO ALLOW SUFFICIENT LENGTH OF WIRE DURING ASSEMBLY TO PREVENT STRAIN IN COMPLETED ASSEMBLY. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | SP-A9-04-4120-F HARNES | FAR 27-72372-1 | 201D 630210 | FACTORY | YES NO | YES 60/C NO | 093730 |
| FAILURE MODE-OPEN (ELECT). THE PROGRAMMER FAILED TO ISSUE A SUSTAINER CUTOFF SIGNAL. REPORTEDLY PIN 6 WAS BENT AND TOUCHING PIN 7. ANALYSIS DID NOT REVEAL ANY DAMAGE TO PIN 6 OR PROGRAMMER. TROUBLESHOOTING REVEALS THAT MISSILE HARNES WIRE ZN142420 FROM PLUG 303032 H WAS NOT TERMINATED TO THE PERMANENT SPLICE POINT. | | | | | | | |
| CORRECTIVE ACTION-MISSILE HARNES REPAIRED. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | MC-A9-20-203-F TRANSISTOR | FAR 27-43016-13 | 1300 630210 | FACTORY | YES NO | | 094240 |
| FAILURE MODE-ELECTRICAL OPEN- FAILURE TRACED TO DEFECTIVE TRANSISTOR BEING OPEN AT JUNCTION OF COLLECTOR LEAD TO CRystal. UNIT DAMAGED ON REMOVAL. | | | | | | | |
| CORRECTIVE ACTION-NONE. UNABLE TO DETERMINE CAUSE OF TRANSISTOR FAILURE. | | | | | | | |

GENERAL DYNAMICS
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13 JUN 1966

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIP | DATE TIME DIP | PRI OTH | VENDOR NAME VENDOR PART NO |
|--|---|--------------------------------|---------------------|------------------|------------|---|
| ELECTRICAL-A/B POWER DISTRIBUTION | 99-20-215F AMPLIFIER-CAPACITOR | FAR 7-04351-3 | 930213 | FACTORY | YES NO | 996001 YES CRESCENT |
| FAILURE MODE-OPEN CIRCUIT OF THE CAPACITOR DUE TO IMPROPER BONDING OF INTERNAL ELEMENT. | | | | | | |
| CORRECTIVE ACTION-VCA 3613-63 REPLY STATES VENDOR HAS INSTITUTED CLOSER SURVEILLANCE DURING ASSEMBLY. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | SP-98-20-200F DEMODULATOR-CAPACITOR | FAR 7-43040-819 | 118D 930203 | ETR | YES NO | 996291 |
| FAILURE MODE-ELECTRICAL SHORT. CAPACITOR C-101 SHORTED INTERNALLY BECAUSE OF A MANUFACTURING DEFECT. | | | | | | |
| CORRECTIVE ACTION-ANSWER TO VCA 3583-63 BY CDE. MIL-C-25C ALLOWS INADEQUATE SPACE FOR THE CAPACITANCE VALUE AND NO LTAGE RATING. MAP M030500 SUBMITTED TO CHANGE CAPACITORS. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-98-14-174-F POWER CHANGEOVER SWITCH. | FAR 27-08177-3 | 134-F 93020. | ETR | YES NO | 996032 YES UNITED CONTROL NO 963-1C |
| FAILURE MODE-ERRATIC OPERATION OF MISSILE PHASE A VOLTAGE WAS REPORTED BUT EXTENSIVE ANALYSIS FAILED TO CONFIRM THE MALFUNCTION. SEVERAL OTHER COMPONENTS WERE REMOVED FROM THE MISSILE AT THE SAME TIME AND ARE ALSO SUSPECTED. | | | | | | |
| CORRECTIVE ACTION-NONE-FAILURE WAS NOT CONFIRMED. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-99-20-201-F TRANSISTOR | FAR 7-43444-813 | 930116 | FACTORY | YES NO | 996260 YES 507C |
| FAILURE MODE-ELECTRICAL SHORT. TRANSISTORS 8-303 AND 8-304 SHORTED. CAUSE UNKNOWN. COULD BE POWER SUPPLY SURGE OR TESTERS ERROR, UNUSUE TO TEST EQUIP. | | | | | | |
| CORRECTIVE ACTION-NONE. COSTS TO CORRECT TEST EQUIPMENT WOULD BE EXCESSIVE. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 99-20-215F TRANSFORMER | FAR | 930114 | FACTORY | YES NO | 996032 YES A.C.ELECTRONIC NO 8 |
| FAILURE MODE-SHORT ELECTRICAL CIRCUIT PROBABLY FROM TRANSFORMER LEADS THAT WERE CLOSE TOGETHER. REMOVAL OF POTTING ALLEVATED SHORTED CONDITION. | | | | | | |

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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO |
|--------------------------------------|---|--------------------------------|---------------------|------------------|------------|-------------------------------|
| | CORRECTIVE ACTION-CLOSER INSPECTION SURVEILLANCE BY TRANSFORMER MFG. (AC ELECTRONICS) RAR 99-20-3615, VCAR 3081-03. | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | AX65-0003-134F/FC-CO-02-0011-030 FILTERELECTRIC | COMPOSITE-FACTORY | 134F 030111 | | NO NO | |
| | FAILURE MODE-OUT OF TOLERANCE. THE AGE MAIN MISSILE 28 VDC POWER SUPPLY FILTER WAS IMPROPERLY ADJUSTED FOR RECORDER 2 CHANNEL 31, RESULTING IN A 33 VDC TRANSIENT AT POWER CHANGEOVER. SYSTEM EFFECT-OPERATION TOO HIGH. VEHICLE EFFECT-COMPOSITE RESCHEDULED. PARTIAL COMPOSITE RETEST PERFORMED. | | | | | |
| | CORRECTIVE ACTION-AFTER READJUSTMENT OF FILTER, A PARTIAL COMPOSITE RETEST WAS PERFORMED TO VERIFY THAT NO DAMAGE TO THE ACOUSTICA COMPUTER HAD OCCURRED AS A RESULT OF COMPUTER BEING SUBJECTED TO 33 VDC TRANSIENT. | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-99-20-196-F LIQUID OXYGEN LEVEL CONTROL | FAR 27-45021-3 | 201D 021217 | FACTORY | YES NO | COLEMAN ELECT. 878. |
| | FAILURE MODE-ELECTRICAL SHORT. DURING FACTORY CHECKOUT, FAILURE CONFIRMED AS CAUSED BY DAMAGED TRANSISTORS RESULTING FROM RUST AND CORROSION. CONTAMINATION RESULTED FROM INADEQUATE SEALING OF UNIT CAN. | | | | | |
| | CORRECTIVE ACTION-VENDOR REVISED HIS SEALING PROCEDURE AND TOOLING TO PROVIDE POSITIVE SEALING AND MOISTURE EVACUATION OF UNIT. | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-99-20-190-F FUEL PROBE ASSEMBLY | FAR 27-72433-803 | 32F 021204 | FACTORY | YES NO | |
| | FAILURE MODE-OPEN (ELECT). UNIT WAS REJECTED DURING FINAL CHECKOUT DUE TO OPEN CIRCUIT. FAILURE WAS CONFIRMED AND CAUSED BY TWO BROKEN LEADS AT TERMINALS. | | | | | |
| | CORRECTIVE ACTION-PRODUCTION PERSONNEL WERE CAUTIONED ON HANDLING OF UNITS, 100 PERCENT INSPECTION OF TRANSDUCER ASSEMBLIES WAS INITIATED. | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 9P-99-24-3093-F HARNESSES | FAR 27-12590-019 | 139D 021203 | FACTORY | YES NO | 60C |
| | FAILURE MODE-SHORT (ELECT). THE SIGNAL CONDITIONER REPORTEDLY FAILED WHEN IT WAS REPORTED THAT THE 9-VOLT DC TRANSducer EXCITATION VOLTAGE WAS MISSING FROM PINS J, K, L, AND M OF PLUG 3/4. FAILURE ANALYSIS SHOWED THAT NO FAILURE EXISTED IN THE SIGNAL CONDITIONER. THE REPORTED FAILURE WAS CAUSED BY A SHORT IN THE MISSILE HARNESSES. THIS SHORT LOADE | | | | | |

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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | STATE TIME DIP | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|---|--------------------------------|---------------------|-------------------|--------------------------------|-------------------------------|--------|
| DOWN THE REGULATOR ASSEMBLY. | | | | | | | 993704 |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | SP-90-20-193F FUEL PROBE ASSEMBLY | FAR 27-72269 | 64E 621119 | WTR | YES NO | | 993086 |
| FAILURE MODE-ELECTRICAL SHORT. FAILURE WAS CONFIRMED BY ANALYSIS AND CAUSED BY A SHORT CIRCUIT BETWEEN THE TRANSFORMER AND TRANSDUCER CASE. | | | | | | | |
| CORRECTIVE ACTION-INVESTIGATION UNDER TCP 1250 REVEALED ERRORS IN VENDOR WIRING. CORRECTIVE ACTION WAS TAKEN WITH VENDOR THROUGH QUALITY ASSURANCE AND ENGINEERING. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | SP-90-14-182-F UNBIL CAL | FAR 27-61960-501 | 230-D 621114 | FACTORY | YES AMP NO 16-14 | | 993767 |
| FAILURE MODE-STRUCTURAL. A SPLICE CONNECTION OPENED AS A RESULT OF AN ACCIDENTAL OVER STRESS, ESTIMATED AT 70 POUNDS, WHEN THE UNBILICAL RECEPTACLE COVER WAS SUSPENDED FROM THE WIRES CONTAINING THE SPLICE. | | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-90-14-184-F HARNESS | FAR 27-61874 | 83F 621114 | WTR | YES 50/C NO | | 994973 |
| FAILURE MODE-OPEN OF WIRES AT PLUG DUE TO IMPROPER ASSEMBLY. BACKSHELL WAS NOT INSTALLED ON CONNECTOR AND WIRES WERE SUPPORTED BY POTTING COMPOUND ONLY. | | | | | | | |
| CORRECTIVE ACTION-ECP 1858 ISSUED DIRECTING RE-INSTALLATION OF BACKSHELLS ON SPECIFIC MISSILES. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | SP-90-14-181-F HARNESS | FAR 81-55900-324 | 190D 621111 | FACTORY | YES AMPHENOL NO 82-202-1000 | | 994980 |
| FAILURE MODE-FAILED OPEN DURING ROUTINE INSPECTION OF HARNESS DUE TO INCORRECT ASSEMBLY. | | | | | | | |
| CORRECTIVE ACTION-PRODUCTION DEPT. AGREED TO DEVELOPE SMALL TRIM-IN-SHELL TEMPLATES TO REFLECT SPECIFIC DIMENSIONS FOR SPECIFIC CONNECTORS. | | | | | | | |

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DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | SITE TIME DIP | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|---|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| ELECTRICAL-A/B POWER DISTRIBUTION | A-9P-20-220-F LOX PROBE ASSY | FAR 27-43165-043 | 94F 621016 | PLAFB | YES NO | GD/C NO | 892474 |
| FAILURE MODE-OPEN (ELECT). OUT OF TOLERANCE TEFLOX INSERT IN ELECTRICAL CONNECTOR PREVENTED PROPER INDEX KEY DEPTH INSERTION, RESULTING IN AN OPEN CIRCUIT. | | | | | | | |
| CORRECTIVE ACTION-GD/C QUALITY CONTROL UPGRADED THE RECEIVING INSPECTION REQUIREMENTS BY REPLACING Q.C. DOCUMENT 27 9C-20038 WITH SPECIFICATION 27-04599, WHICH CONTROLS CONNECTOR ACCEPTANCE TOLERANCES. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-9P-20-174-F FUEL PROBE ASSEMBLY | FAR 27-72269-021 | 820927 | FACTORY | YES NO | | 893204 |
| FAILURE MODE-SHORT (ELECT). UNIT WAS REJECTED BECAUSE OF SHORTED ELECTRICAL CIRCUITS IN THE PROBE. FAILURE WAS CONFIRMED. FAILURE WAS CAUSED BY POOR WORKMANSHIP IN SOLDERING TECHNIQUES AND MISHANDLING. | | | | | | | |
| CORRECTIVE ACTION-EQUIPMENT OPERATING PROCEDURE WAS CHANGED TO PROVIDE 100 PCT RESISTANCE INSPECTION OF PROBES. PER SONNEL WERE CAUTIONED REGARDING ASSEMBLY AND INSPECTION OF THE ASSEMBLY. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-49-14-146-F CONNECTOR-ELECT | FAP 7-04326-3 | 820925 | FACTORY | YES NO | CANNON NO 17070-0684 | 895811 |
| FAILURE MODE-CONTAMINATION. INTERMITTENT OPEN OF PIN 66 IN UNILITICAL RECEPTACLE WAS CAUSED BY AN EXCESSIVE AMOUNT OF PRIMER BEING APPLIED BETWEEN THE FACE PLATES AND SQUEEZING ONTO THE PINS. ALSO PRIMER MATERIAL ON PINS. | | | | | | | |
| CORRECTIVE ACTION-MANUFACTURING WAS REQUESTED TO PROTECT PINS WHEN APPLYING PRIMER AND THE VENDOR WAS REQUESTED TO EXERCISE CAUTION WHEN APPLYING PRIMER. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 3P-95-14-156-F HARNESS | FAR 27-61889-009 | 215D 820914 | ETR | YES NO | AMP NO 321807 | 894670 |
| FAILURE MODE-STRUCTURAL. OPEN DUE TO BREAK DURING FIVE POUND PULL TEST. SPLICE BELIEVED TO HAVE BEEN WEAKENED BY PREVIOUS FLEXING AND TENSION. | | | | | | | |
| CORRECTIVE ACTION-NONE. | | | | | | | |

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|---|--|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| ELECTRICAL-A/B POWER DISTRIBUTION | A-10-20-183F CONNECTOR, ELECT.-WINDMETER ASSY | FAR | 1280 620911 | WTR | YES NO | | 093939 |
| FAILURE MODE-ERRATIC OPERATION-THE ELECTRICAL TEE CONNECTOR REPORTEDLY FAILED WHEN IT OPERATED ERRATICALLY. THE TEE ELECTRICAL CONDUCTANCE WAS ERRATIC. THE FAILURE WAS CAUSED BY THE UNSCREENED PIN. | | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. RESPONSIBLE ENGINEERS AT THE TEST RANGES WERE NOTIFIED TO CHECK THE PINS FOR LOOSENESS. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | SP-A9-24-307GC HARNESS | FAR 27-11409-801 | 620907 | FACTORY | YES NO | | 093164 |
| FAILURE MODE-OPEN (ELECTRICAL). THE HARNESS ASSEMBLY FAILED DURING THE END TO END CHECKOUT PROCEDURE WHEN AN INTERMITTENT OPEN WAS FOUND IN PIN F OF CONNECTOR P5018. NO ANALYSIS WAS PERFORMED BECAUSE THE PART WAS REPAIRED. | | | | | | | |
| CORRECTIVE ACTION-NONE. THERE WAS NO FAILURE ANALYSIS. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | HG-98-14-140F CONNECTOR ELECT. | FAR 27-81872-809 | 620904 | | YES NO | YES 10SL CANNON | 093939 |
| FAILURE MODE-OPEN CIRCUIT-ENTRAPPED MOISTURE IN VOIDS OF SOLDERED CONNECTION COULD LEAD TO FAILURE OF THE CONNECTION. | | | | | | | |
| CORRECTIVE ACTION-1-HAVE ALL SOLDER OPERATORS CERTIFIED FOR SOLDERING. 2-WRITE NEW SPEC. CLEARLY DEFINING EFFECTIVE SOLDERING PROCEDURE. 3-USE PRE-FILLED SOLDER CUPS 4-FAVOR USE OF CRIMP-TYPE CONNECTORS 5-X RAY-CRITICAL CONNECTORS. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | HG-98-14-139F CONNECTOR ELECT. | FAR 27-81874-801 | 620904 | ETR | YES NO | YES CANNON NO 10SL | 093941 |
| FAILURE MODE-OPEN CIRCUIT-ENTRAPPED MOISTURE IN VOIDS OF SOLDERED CONNECTION COULD LEAD TO FAILURE OF THE CONNECTION. AS WAS EXPERIENCED. IMPROPER SOLDERED CONNECTION. | | | | | | | |
| CORRECTIVE ACTION-1-HAVE ALL SOLDER OPERATORS CERTIFIED FOR SOLDERING. 2-WRITE NEW SPEC. CLEARLY DEFINING EFFECTIVE SOLDERING PROCEDURE. 3-USE PRE-FILLED SOLDER CUPS 4-FAVOR USE OF CRIMP-TYPE CONNECTORS 5-X RAY CRITICAL CONNECTORS. | | | | | | | |

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|--|---|--------------------------------|---------------------|------------------|------------|--------------------------------|
| ELECTRICAL-A/B POWER DISTRIBUTION | HC-98-14-138F SWITCH | FAR 27-61888-889 | 113D 820900 | ETR | YES NO | YES EAGLE-PICHER NO |
| FAILURE MODE-FAIL TO OPERATE AT PRESCRIBED TIME-PYROTECHNIC SWITCH FAILED TO EXTINGUISH MONITOR LIGHT AFTER BATTERY ACTIVATION. (TWO BATTERIES.) SIMILAR FAILURE OCCURRED ON MISSILE 179D. | | | | | | |
| CORRECTIVE ACTION-NEW PYROTECHNIC SWITCH MADE AVAILABLE FOR USE ON D-SERIES MISSILES. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | HC-98-14-137F CONNECTOR ELECT | FAR 27-62711 | 820931 | ETR | YES NO | YES 60/C NO |
| FAILURE MODE-ELECTRICAL OPEN CIRCUIT CAVITIES IN SOLDER CONNECTIONS BETWEEN CONTACT WIRES AND FINS. | | | | | | |
| CORRECTIVE ACTION-CORRECT SOLDERING TECHNIQUES TO BE EMPHASIZED. 60/C COMMITTEE INITIATED A STUDY TO IMPROVE METHOD S AND TECHNIQUES TO ELIMINATE SOLDERING WHENEVER POSSIBLE. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 774-400-02-113 CONNECTOR | COMPOSITE-B FACT | 113D 820930 | 14 | YES NO | |
| FAILURE MODE-SHORT. MEASUREMENT P83P, 82 PUMP SPEED, EXHIBITED FLUCTUATIONS AFTER THE TELEMETRY STAGING PLUG WAS DISCONNECTED. CAUSE WAS BELIEVED TO BE MOISTURE IN THE PLUG. | | | | | | |
| SYSTEM EFFECT-IMPROPER ANALOG SIGNALS. | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-8D-14-130-C CONNECTOR-UMBILICAL RECEPTACLE | FAR 7-08382 | 780986 | WTR | YES NO | YES CANNON NO CR 17070-0846 |
| FAILURE MODE-REPORTED FAILED DURING OPERATION. EXACT FAILURE MODE NOT DEFINED. ITEM NOT RECEIVED FOR FAILURE ANALYSIS. | | | | | | |
| CORRECTIVE ACTION-NONE. | | | | | | |

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|--|--|-----------------------------|---------------------|------------------|------------------|-------------------------------|
| ELECTRICAL-A/B POWER DISTRIBUTION | AE62-0792/PR-40R-00179 HARNESS | FLIGHT | 1790 620827 | 12 129 | YES NO | 998539 |
| FAILURE MODE-FAIL DURING OPERATION. TEMPORARY SHORT BETWEEN PINS A AND B OF P607 ON THE V2 P/R FEEDBACK TRANSDUCER OR A TEMPORARY OPEN IN THE LEAD FROM THE EXCITATION TRANSFORMER TO PIN C OF P607 OR A TEMPORARY OPEN BETWEEN PIN T O P 305U2P1 ON THE FILTER-SERVO PACKAGE AND PIN C OF P608 ON THE V2 P/R ACTUATOR SERVOVALVE. | | | | | | |
| SYSTEM EFFECT-IMPROPER ANALOG SIGNALS. V2 PITCH AND ROLL CONTROL LOST AT 129 SECONDS. MISSILE ROLL STABILITY LOST AT 1790. RECOVERY OF V2 PITCH AND ROLL CONTROL OCCURRED AT 189 SECONDS. | | | | | | |
| VEHICLE EFFECT-LOSS OF VEHICLE STABILITY. MISSILE ROLL STABILITY LOST AT BECO. STABILITY WAS RECOVERED AT 198 SECONDS. VEHICLE MISSION WAS SATISFACTORILY ACCOMPLISHED. | | | | | | |
| CORRECTIVE ACTION-IMPROVEMENT OF PLUG AND HARNESS FABRICATION AND INSPECTION TECHNIQUES. FUNCTIONAL CHECK DURING LAST STAGES OF MISSILE PRELAUNCH CHECKS. DELETION OF NON ESSENTIAL SPLICES IN ALL SPACE BOOSTERS. REPLACEMENT OF EXISTING CONNECTORS WITH IMPROVED TYPE. REDESIGN OF VERNIER CLAM-SHELL. STUDY THE USE OF CRIMP-TYPE CONNECTORS | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-9L-20-228-F LOX PROBE ASSY | FAR 27-43165-033 | 38F 620820 | LATD | YES NO | 992708 |
| FAILURE MODE-OPEN (ELECT). ONE FILAMENT IN SENSOR WAS BROKEN. THE OTHER WAS INTACT. | | | | | | |
| CORRECTIVE ACTION-NO CORRECTIVE ACTION TAKEN. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | HG-9B-20-148P MANDREL | FAR 27-43016-13 | 113-D 620817 | ETR | YES 50/C NO | 995517 |
| FAILURE MODE-SHORT (ELECT)-P/U SET REPORTEDLY FAILED WHEN LOW MANOMETER INDICATED A SHORT FROM THE MANDREL THROUGH THE DIELECTRIC TO GROUND. DAMAGE IN THE DIELECTRIC, APPARENTLY PRODUCED DURING HANDLING, HAD FORMED A PINHOLE THROUGH THE DIELECTRIC. | | | | | | |
| CORRECTIVE ACTION-IT IS RECOMMENDED A MORE EFFECTIVE TEST BE DEvised FOR THE DETECTION OF PINHOLES IN MANDREL DIELECTRIC COATING. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-9B-14-133F CONNECTOR P-701 AUTOPILLOT CABLING | FAR 27-62711-081 | 1790 620819 | ETR | YES BENDIX NO | 998515 |
| FAILURE MODE-OUT OF TOLERANCE. LOW PIN-TO-PIN RESISTANCE IN POTTED CONNECTOR. | | | | | | |
| CORRECTIVE ACTION-NEW POTTING METHODS AND QUALITY CONTROL EMPHASIS ON POTTING OPERATIONS. | | | | | | |
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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | SITE TIME DIP | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|---|--------------------------------|---------------------|------------------|--------------------|-------------------------------|--------|
| ELECTRICAL-A/B POWER DISTRIBUTION | W6-99-14-193-F HARNESS | FAR 27-92702-819 | 1300 620806 | FACTORY | YES NO | YES CANNON NO 017070-0648 | 899799 |
| FAILURE MODE-OUT OF TOLERANCE-CRITICAL DIMENSIONS NOT MET DUE TO POOR MANUFACTURING METHODS AND INADEQUATE QUALITY CONTROL. | | | | | | | |
| CORRECTIVE ACTION-VENDOR'S QUALITY CONTROL PROCEDURES WERE REVISED. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | SP-A9-14-133F HARNESS | FAR 27-81852-801-01 | 149D 620807 | S.D. | NO NO | NO 60/C | 899943 |
| FAILURE MODE-OUT OF TOLERANCE. HIGH RF INSERTION LOSS. | | | | | | | |
| CORRECTIVE ACTION-NONE, ANALYSIS INDICATED THE HARNESS WAS ACCEPTABLE. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | DAT63/DE-840-08-37 UMBILICAL CONNECTOR | COMPOSITE-PRD/DPL | 37F 620807 | 6 | YES NO | | 899773 |
| FAILURE MODE-OPEN (ELEC)-FAULTY PIN CONNECTIONS IN AN UMBILICAL CONNECTOR GAVE FALSE INDICATION OF NO MISSILE AC POWER. | | | | | | | |
| SYSTEM EFFECT-NONE. | | | | | | | |
| VEHICLE EFFECT-COMPOSITE ABORTED. | | | | | | | |
| CORRECTIVE ACTION-UMBILICAL REPLACED. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-99-14-134-F SWITCH-CHANGEOVER | FAR 27-06177-3 | 620801 | WALRER | YES KINETICS NO | YES KINETICS NO M801021-1 | 894904 |
| FAILURE MODE-FAILED TO OPERATE AT PRESCRIBED TIME. SWITCH DID NOT TRANSFER TO INTERNAL POSITION DURING A VALIDATION RUN. FAILURE WAS CONFIRMED. MOTOR WHICH DRIVES SWITCH HAD BEEN OVERHEATED. REASON FOR OVERHEATING WAS NOT DETERMINED. | | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. FIELD PERSONNEL WERE NOTIFIED NOT TO CONTINUE TRYING TO ACTIVATE A MALFUNCTIONING SWITCH WHICH MAY RESULT IN EXTENSIVE DAMAGE TO SWITCH MOTOR AND PREVENT FINDING EXACT CAUSE OF FAILURE. | | | | | | | |

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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | D/F DATA SOURCE PART NUMBER | VEHICLE DATE DIP | SITE TIME DIP | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|---|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| ELECTRICAL-A/B POWER DISTRIBUTION | MC-99-14-163-F HARNESS | FAR 27-82708-819 | 1300 820808 | FACTORY | YES NO | CANNON 017070-3846 | 998768 |
| FAILURE MODE-OUT OF TOLERANCE-CRITICAL DIMENSIONS NOT MET DUE TO POOR MANUFACTURING METHODS AND INADEQUATE QUALITY CONTROL. | | | | | | | |
| CORRECTIVE ACTION-VENDOR'S QUALITY CONTROL PROCEDURES WERE REVISED. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | SP-A9-14-135F HARNESS | FAR 27-81852-801-01 | 1490 820807 | S.D. | NO NO | 60/C | 998943 |
| FAILURE MODE-OUT OF TOLERANCE. HIGH RF INSERTION LOSS. | | | | | | | |
| CORRECTIVE ACTION-NONE, ANALYSIS INDICATED THE HARNESS WAS ACCEPTABLE. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | DAT63/02-840-08-37 UMBILICAL CONNECTOR | COMPOSITE-TRD/DPL | 377 820807 | 6 | YES NO | | 998773 |
| FAILURE MODE-OPEN (ELEC)-FAULTY PIN CONNECTIONS IN AN UMBILICAL CONNECTOR GAVE FALSE INDICATION OF NO MISSILE AC POWER. | | | | | | | |
| SYSTEM EFFECT-NONE. | | | | | | | |
| VEHICLE EFFECT-COMPOSITE ABORTED. | | | | | | | |
| CORRECTIVE ACTION-UMBILICAL REPLACED. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-98-14-134-F SWITCH-CHANGEOVER | FAR 27-08177-3 | 820801 | WALKER | YES NO | KINETICS ME01021-1 | 994084 |
| FAILURE MODE-FAILED TO OPERATE AT PRESCRIBED TIME. SWITCH DID NOT TRANSFER TO INTEGRAL POSITION DURING A VALIDATION RUN. FAILURE WAS CONFIRMED. MOTOR WHICH DRIVES SWITCH HAD BEEN OVERHEATED. REASON FOR OVERHEATING WAS NOT DETERMINED. | | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. FIELD PERSONNEL WERE NOTIFIED NOT TO CONTINUE TRYING TO ACTIVATE A MALFUNCTIONING SWITCH WHICH MAY RESULT IN EXTENSIVE DAMAGE TO SWITCH MOTOR AND PREVENT FINDING EXACT CAUSE OF FAILURE. | | | | | | | |

GENERAL NAME
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| SYSTEM | TEST/REPORT NUMBER | DIF DATA SOURCE | VEHICLE | DATE | TIME | DIF | PHI | VEHICLE NAME |
|---|---|-------------------|---------|---------|------|-----------|-------|--------------|
| SUB-SYSTEM | FAILED COMPONENT NAME | PART NUMBER | DATE | DIF | TIME | DIF | PHI | VEHICLE NAME |
| ELECTRICAL-A/B POWER DISTRIBUTION | DAT83/02-040-04-37 SENSOR | COMPOSITE-FRD/DPL | 37F | 6 | YES | NO | | |
| | | | 620730 | | | | | |
| FAILURE MODE-OUT OF SPECIFICATION OR TOLERANCE. AC LOW SENSOR DRIFTED 2.5VAC HIGH-INVERTER FAULT RECEIVED. | | | | | | | | |
| SYSTEM EFFECT-NONE. PROBLEM IN AGE. | | | | | | | | |
| VEHICLE EFFECT-COMMIT SEQUENCE AND COMPOSIT" ABORTED. | | | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-99-04-3383F EXCITATION TRANSFORMER | FAR | 620730 | FACTORY | YES | TRANSONIC | NO | |
| | | 27-04355-3 | | | | | | |
| FAILURE MODE-ELECTRICAL OPEN. THE TRANSFORMER WAS IR/D DURING SYSTEMS CHECK IN FINAL CHECKOUT. THE OUTPUT WAS ZERO ACROSS PINS 5,7,8,9 OF PLUG 303U4B. THE XFORMER CASE WAS OPENED AND FIVE WIRING DISCREPANCIES WERE FOUND. | | | | | | | | |
| CORRECTIVE ACTION-VENDOR AND 50/C QUALITY CONTROL TO REVIEW PROCEDURES FOR MANUF. AND RECEIVING INSPECTION TO PREVENT RECURRENT OF THIS PROBLEM. REF FAR A-99-04-727 DATED 21 SEPT 82. ALSO ALL TRANSFORMERS IN STOCK REINSPECTED. | | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 30-90-14-130F WIRING | FAR | 620726 | YES | AMP | NO | 22-16 | 1-21 |
| | | 27-02746-803-2 | | | | | | |
| FAILURE MODE-OPEN ELECTRICAL- WIRE SPLICE IN AUTOPILOT HARNESS FAILED OPEN. | | | | | | | | |
| CORRECTIVE ACTION-FAILURE ANALYSIS INDICATED IMPROPER WIRE SPLICE. TIGHTER QUALITY- CONTROL ACTION INITIALED. SLV-3 B CONTRACT MISSILES WILL HAVE ALL PERMANENT SPLICES REMOVED. | | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | H6-A9-14-100-C HARNESS | FAR | 620725 | FACTORY | YES | CANNON | NO | UNKNOWN |
| | | 7-06320-1 | | | | | | |
| FAILURE MODE-LOSS OF STRUCTURAL INTEGRITY DUE TO CRACK IN UNBILICAL RECEPTACLE. | | | | | | | | |
| CORRECTIVE ACTION-RECOMMENDATION WAS MADE TO AND ACCEPTED BY THE VENDOR TO REDESIGN THE RECEPTACLE TO INCLUDE A CHAMFER ON THE END OF THE SLEEVE GUIDE AND IN THE SPRING-RETAINING CUP HOLE. A SPECIAL TOOL WAS DESIGNED FOR USE IN ASSEMBLY OF THE RECEPTACLE. | | | | | | | | |

GENERAL DYNAMICS
CONVAIR DIVISION

13 JUN 1960

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | SITE TIME DIP | PRI OTH | VENDOR NAME VENDOR PART NO |
|--|---|--------------------------------|---------------------|------------------|------------|-------------------------------|
| ELECTRICAL-A/B POWER DISTRIBUTION | A-9B-14-133-C HARNES8 | FAR 27-92734-031 | 620718 | ETR | YES NO | 604993 |
| FAILURE MODE-REPORTED FAILED DURING OPERATION WHEN THE SUSTAINER ENGINE WENT HARD OVER IN PITCH WITH NO PITCH SIGMA L APPLIED. | | | | | | |
| CORRECTIVE ACTION-NONE-ITEM WAS NOT FAILURE ANALYZED. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-9D-14-131F WIRING | FAR 27-06108-001 | 1200 620717 | VAFB | YES NO | 609918 |
| FAILURE MODE-SHORT ELECTRICAL- INPUT LEADS SHORTED AND BURNED OFF. | | | | | | |
| CORRECTIVE ACTION-WIRING REPAIRED. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-9B-14-171-C HARNES8 | FAR 27-60050-3 | 620717 | ETR | YES NO | 609920 |
| FAILURE MODE-FAIL DURING OPERATION. AUTOPILOT CONTROL OF VERNIER ENGINE NO. 2 WAS LOST. | | | | | | |
| CORRECTIVE ACTION-FAILURE NOT CONFIRMED. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | SP-9. 20-106F TRANSDUCER | 7-45040-019 | 620717 | ETR | YES NO | 603700 |
| FAILURE MODE-ELECTRICAL OPEN-REPORTED FAILURE OF COMPUTER COMPARTOR DURING FUNCTIONAL CHECK WHEN VALVE VARIED ERRATICA TICALLY BETWEEN 23 AND 25 DEGREES. FAILURE WAS CAUSED BY A COLD-SOLDER JOINT AND AN UNSOLDERED JOINT IN THE POSITION TRANSDUCER, RESULTING IN INTERMITTENT OPERATION OF THE TRANSDUCER. | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. SINCE NOVEMBER 1960 THESE UNITS HAVE BEEN MANUFACTURED AT CRESENT ENGINEERING AND RESEAR CH COMPANY IN EL MONTE, CALIFORNIA/ UNDER GOOD INSPECTION AND QUALITY-CONTROL PROCEDURES. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A682-069182-402-00-141 UMBILICAL CONNECTOR | FLIGHT | 1410 620712 | 5788-2 320 | YES NO | |
| FAILURE MODE-FAIL TO OPERATE AT PRESCRIBED TIME. ATLAS/RE-ENTRY VEHICLE BUMPING DUE TO FAILURE OF THE R/V UMBILICAL TO DISCONNECT PROPERLY. SIMILAR OCCURRENCE ON 1870. THE EFFECT WAS OBSERVED ON ATLAS DATA. | | | | | | |

GENERAL KINETICS
CONVAIR DIVISION

15 JUN 1966

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | SITE TIME DIP | PRI OTH | VENDOR NAME VENDOR PART NO | |
|--|--|--------------------------------|---------------------|------------------|-------------------------|-------------------------------|--------|
| SYSTEM EFFECT-NONE. | | | | | | | 097436 |
| VEHICLE EFFECT-LOSS OF VEHICLE STABILITY. CHANGE OF VEHICLE ATTITUDE DUE TO FAILURE OF UMBILICAL TO SEPARATE PROPERLY. | | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | AE82-0891/B2-402-00-141 HARNES3 | FLIGHT | 1410 020712 | B-2 O. | YES YES | | 098010 |
| FAILURE MODE-FAIL TO OPERATE AT PRESCRIBED TIME. DURING THE FIRST 50 SECONDS OF FLIGHT, ENGINE RESPONSE IN YAW WAS GREATLY ATTENUATED DUE TO AN OPEN CIRCUIT IN A HARNES OR CONNECTION, PROGRAMMER SWITCH 43, OR A DEFECTIVE YAW CHANNEL STABILIZATION FILTER. | | | | | | | |
| SYSTEM EFFECT-IMPROPER ANALOG SIGNALS. YAW CONTROL WAS MARGINAL UNTIL 50 SECONDS WHEN THE FILTER OUTPUT SIGNAL WAS ACQUIRED. SYSTEM PERFORMANCE WAS THEN SATISFACTORY. | | | | | | | |
| VEHICLE EFFECT-NONE. ACQUISITION OF YAW CONTROL AT 50 SECONDS WAS SUFFICIENT FOR OVER-ALL MISSION ACCOMPLISHMENT. | | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | CT-99-14-004C MAIN MISSILE POWER CHANGEOVER SWIT 55-08111-1 CH | FAR | 020707 | FACTORY | YES KINETICS NO | | 098036 |
| FAILURE MODE-FAILURE TO OPERATE AT PRESCRIBED TIME BY FAILING TO TRANSFER FROM INTERNAL TO EXTERNAL DURING RECEIVING INSPECTION. | | | | | | | |
| CORRECTIVE ACTION-NONE. THIS PART FAILED IN 60/C RECEIVING INSPECTION AND WAS RETURNED TO THE VENDOR FOR REMOVAL. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-9D-14-128P HARNES3 | FAR | 1240 020706 | VAFB | YES AMP NO 22-16 1-2 | | 098046 |
| FAILURE MODE-OPEN (ELECT). WIRE SPLICE IN AUTOPILOT HARNES3 FAILED PULL TEST. | | | | | | | |
| CORRECTIVE ACTION-FAILURE ANALYSIS INDICATED IMPROPER WIRE SPLICE. INITIATION OF QUALITY-CONTROL CORRECTIVE ACTION. | | | | | | | |

GENERAL DYNAMICS
CONVAIR DIVISION

15 JUN 1966

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO |
|--|---|--------------------------------|---------------------|------------------|--------------------|-------------------------------|
| ELECTRICAL-A/B POWER DISTRIBUTION | SP-99-04-323EF HARNESS | FAR 27-61842-819 | 136D 820826 | FACTORY | YES SDC NO | 895672 |
| FAILURE MODE-SHORT (ELECT). A SHORT WAS FOUND IN AN AUTOPILOT HARNESS CAUSED BY INCORRECT WIRING. DISCOVERED AS A RESULT OF INVESTIGATION OF A SHRD NO 60 DURING MISSILE CHECKOUT. | | | | | | |
| CORRECTIVE ACTION-THE SHORT OCCURRED IN THE HARNESS DUE TO A WIRING DIAGRAM ERROR. WIRING DIAGRAM ERROR CORRECTED. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | SP-99-04-3233 HARNESS | FAR 27-41002-909 | 136D 820826 | FACTORY | YES SDC/A NO | 894587 |
| FAILURE MODE-SHORT (ELECT). NO OUTPUT FROM SHRD. FAILURE CAUSED BY 26V 400CP8 WIRED INTO SHRD OUTPUT DUE TO HARNESS WIRING ERROR. | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-90-14-124F CONNECTOR ELECT. | FAR 7-64358-3 | 820827 | MTR | NO SDC/C NO | 895823 |
| FAILURE MODE-FAILURE TO OPERATE AT PRESCRIBED TIME. POOR CONNECTOR CONTACT. | | | | | | |
| CORRECTIVE ACTION-RAR 90-14-659 REQUESTING QUALITY CONTROL TO IMPROVE INSPECTION SURVEILLANCE OF THIS PARTS ASSEMBLY. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-98-14-120F POWER CHANGEOVER SWITCH | FAR 27-08106-801 | 131D 820427 | FACTORY | YES KINETICS NO | 898799 |
| FAILURE MODE-ELECTRICAL OPEN CIRCUIT OCCURRED INTERMITTENTLY ON PIN H, J704, AND PIN A, J708. EXCESS CONTACT LUBRICANT WAS THE CAUSE. | | | | | | |
| CORRECTIVE ACTION-VENDOR TOOK ACTION TO CONTROL THE QUANTITY OF CONTACT LUBRICANT APPLICATION. | | | | | | |

GENERAL DYNAMICS
CONVAIR DIVISION

13 JUN 1968

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO |
|---|--|-----------------------------------|---------------------|------------------|--------------------|-------------------------------|
| SUB-SYSTEM | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | AE61-1277/LI-401-00-113 AIRBORNE RECEPTACLE-UMBILICAL PLUG PI007 | FLIGHT | 1150 620617 | 1-1 -2.4 | YES NO | 993046 |
| FAILURE MODE-PREATURE OPERATION. A MECHANICAL FAILURE OF THE AIRBORNE RECEPTACLE OF BOOSTER PROPULSION UMBILICAL P LUG PI007 CAUSED THE PLUG TO EJECT PREMATURELY AT -2.403 SECONDS 170 MILLISECONDS AFTER MAIN ENGINES COMPLETE. | | | | | | |
| SYSTEM EFFECT-NONE. PREMATURE DATA LOSS ON EIGHT SEQUENCE RECORDER MEASUREMENTS, HOWEVER, A LAUNCH ABORT WOULD HAVE OCCURRED HAD PI007 FALLEN OUT BEFORE RECEIPT OF MAIN ENGINES COMPLETE. | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-99-14-112F POWER CHANGEOVER SWITCH | FAR 27-06106-801 | 1240 620619 | FACTORY | YES KINETICS NO | 993039 |
| FAILURE MODE-FAILURE DURING OPERATION. THE SWITCH D.C. CONTACTS WERE BREAKING BEFORE MAKING IN TRANSFER FROM EXTERN AL TO INTERNAL THE REPORTED FAILURE WAS NOT CONFIRMED. | | | | | | |
| CORRECTIVE ACTION-GROUNDING OF SIMULATED BATTERY CHECKOUT CABLE AND POWER SUPPLY MODIFICATION TO INCLUDE TRANSIENT PEAK FILTER WAS INCORPORATED. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | AR141-0-1-124/PC-100-03-124 SWITCH, CHANGEOVER | COMPOSITE-FACTORY 27-06106-801 | 1240 620614 | | YES NO | 993069 |
| FAILURE MODE-FAIL DURING OPERATION. 9.8 VDC TRANSIENTS WERE INDICATED ON THE 28 VDC INTERNAL AND EXTERNAL LINES AT POWER CHANGEOVER DUE TO A FAULTY POWER CHANGEOVER SWITCH. | | | | | | |
| SYSTEM EFFECT-OPERATION TOO HIGH. | | | | | | |
| VEHICLE EFFECT-COMPOSITE RESCHEDULED. SYSTEM AND COMPOSITE RETESTING WAS REQUIRED. | | | | | | |
| CORRECTIVE ACTION-POWER CHANGEOVER SWITCH WAS REPLACED. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | AR141-0-1-124/PC-100-03-124 HARNESS | COMPOSITE-FACTORY 27-06106-801 | 1240 620614 | | NO 80/C NO | |
| FAILURE MODE-OUT OF TOLERANCE. INTERNAL 28 VDC INDICATED 28.0 VDC FROM POWER C/O TO END OF TEST DUE TO A FAULTY BAT TERY SIMULATOR CABLE. | | | | | | |
| SYSTEM EFFECT-OPERATION TOO LOW. | | | | | | |
| VEHICLE EFFECT-COMPOSITE DELAYED. | | | | | | |

15 JUN 1966

GENERAL NAHICS
CORVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PHI VENDOR PART NO | VENDOR NAME VENDOR PART NO | |
|---|---|--------------------------------|---------------------|------------------|-----------------------|-------------------------------|--------|
| CORRECTIVE ACTION-THE BATTERY SIMULATOR CABLE WAS REPLACED. | | | | | | | 099640 |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-90-14-112F CONNECTOR-ELECT. | FAR ZK37A20 | 020614 | WTR | YES | 60/C NO | 099621 |
| FAILURE MODE-ELECTRICAL SHORT. CIRCUIT SHORT OCCURRED INTERMITTENTLY. | | | | | | | |
| CORRECTIVE ACTION-RAR A-90-14-858 REQUESTED QUALITY CONTROL TO EXERCISE MORE STRINGENT INSPECTION OF THE PART. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-90-14-113F POWER CHANGEOVER SWITCH | FAR 27-06106-901 | 1130 020329 | WTR | YES | KINETICS NO | 099601 |
| FAILURE MODE-OUT OF SPECIFICATION. FAILURE TO TRANSFER IN THE ALLOTTED TIME. FAILURE WAS UNCONFIRMED BY FAILURE ANALYSIS. | | | | | | | |
| CORRECTIVE ACTION-NONE, SINCE FAILURE WAS UNCONFIRMED. THIS UNIT AND ASSOCIATED HARDWARE WILL RECEIVE CLOSE HARDWARE E WILL RECEIVE CLOSE SURVEILLANCE. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-90-14-111C ELECTRICAL CONNECTOR | FAR 7-04320-1 | 020323 | WTR | YES | CANNON NO | 099640 |
| FAILURE MODE-CONTAMINATION. FAILURE TO OPERATE CAUSED BY MOISTURE OR CONTAMINATES. INTERFERING WITH RELEASE. | | | | | | | |
| CORRECTIVE ACTION-NONE. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-9H-06-142 LOX PROBE WIRING | FAR 27-43163-819 | 467 020308 | SAFB | YES | 60/C NO | 099632 |
| FAILURE MODE-ELECTRICAL OPEN, UNIT REJECTED FOR AN OPEN CIRCUIT INDICATION, WHICH WAS CONFIRMED-BOTH FILAMENT WIRES WERE BROKEN BECAUSE OF INSUFFICIENT BLACK IN THE WIRES. | | | | | | | |
| CORRECTIVE ACTION-NONE THIS DESIGN HAS BEEN SUPERCEDED. | | | | | | | |

GENERAL DYNAMICS
CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO |
|--|---|--------------------------------|---------------------|------------------|------------|---------------------------------|
| ELECTRICAL-A/B POWER DISTRIBUTION | A-90-14-113P UMBILICAL PLUG | FAR 27-08172-821 | 620417 | WTR | YES NO | YES GRAY-MULEGUARD NO |
| FAILURE MODE-FAIL TO OPERATE AT PRESCRIBED TIME. UMBILICAL PLUG FAILED TO EJECT AT COMMAND. | | | | | | |
| CORRECTIVE ACTION-RELIABILITY GENERATED FAR A-98-40-861 WHICH REQUIRES SEALING THE EJECTION SOLENOID WITH CORROSION RESISTANT MATERIALS. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 63-0690 ACOUSTICA STATION 5 FUEL PROBE | COMPOSITE-FRD/DPL | 142D 620410 | WTR | YES NO | |
| FAILURE: MODE-OPEN (ELECTRICAL). ACOUSTICA STATION 5 FUEL PROBE INDICATED OPEN. | | | | | | |
| SYSTEM EFFECT-NONE. | | | | | | |
| VEHICLE EFFECT-COUNTDOWN ABORTED. | | | | | | |
| CORRECTIVE ACTION-MISSILE REMOVED FROM SITE FOR INSPECTION. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | D4687 CHANGE-OVER SWITCH | COMPOSITE-FRD/DPL | 110D 620402 | 1-2 | YES NO | YES UNITED CONTROL NO S CORP |
| FAILURE MODE-OUT OF TOLERANCE. MISSILE AC POWER FAULT RECEIVED CAUSED BY BLOW DC POWER CHANGE-OVER CYCLE. | | | | | | |
| SYSTEM EFFECT-OPERATION TOO LONG. TIME FROM POWER TRANSFER TO EXTERNAL TO RECEIPT OF POWER ON EXTERNAL WAS 1.4 SECS | | | | | | |
| NOS-RESULTED IN POWER LOSS TO MPU OF 0.15 SECONDS. | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | D4687 HARNES | COMPOSITE-FRD/DPL | 110D 620402 | 1-2 | YES NO | YES 60/C NO |
| FAILURE MODE-FAIL DURING OPERATION. POST TEST INVESTIGATION OF A FAILURE TO NULL THE ENGINES IN THE PITCH PLANE REV EALD A FAULTY RECEPTICAL IN UMBILICAL J1001. | | | | | | |
| SYSTEM EFFECT-IMPROPER DISCRETE SIGNAL. | | | | | | |
| VEHICLE EFFECT-COMPOSITE DELAYED. | | | | | | |
| CORRECTIVE ACTION-PITCH NULL SIGNAL REROUTED. | | | | | | |

13 JUN 1966

GENERAL MANICS
CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|---|--------------------------------|---------------------|------------------|------------|-------------------------------|----|
| ELECTRICAL-A/B POWER DISTRIBUTION | A-98-14-104F POWER CHANGEOVER SWITCH | FAR 27-06106-801 | 480322 | FACTORY | YES | KINETICS | NO |
| FAILURE MODE-ERRATIC OPERATION FROM IMPROPER INSTALLATION OF RECEPTACLE AT POWER SWITCH. | | | | | | | |
| CORRECTIVE ACTION-FACTORY SUPERVISION WAS MADE AWARE OF THE INSTALLATION INADEQUACY. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-98-20-137F COMPUTER | FAR 27-43040-821 | 620308 | ETR | YES | 60/C | NO |
| FAILURE MODE-SHORT (ELECT.) COMPUTER COMPARTMENT WAS REPORTED TO HAVE FAILED WHEN IT EXHIBITED NO ERROR DEMODULATOR OUTPUT VOLTAGE. THE REPORT FAILURE WAS NOT CONFIRMED. | | | | | | | |
| CORRECTIVE ACTION-NO ACTION TAKEN. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | CT-9A-14-003P HARNESS | FAR 55-60314 | 620305 | EDWARDS | YES | 60/C | NO |
| FAILURE MODE-ELECTRICAL OPEN CIRCUIT OCCURRED INTERMITTENTLY AT A PERMANENT SPLICE. | | | | | | | |
| CORRECTIVE ACTION-RAR CT-9A-14-802 RECOMMENDED REDESIGN OF HARNESS SPLICE FOR IMPROVED SPLICE TECHNIQUES IN THE ARE A OF MOISTURE PROOFING. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-98-14-106F HARNESS | FAR 27-60032-3 | 23F | SCHILLIN | YES | 60/C | NO |
| FAILURE MODE-ELECTRICAL OPEN. CIRCUIT BETWEEN P603, PIN (E) AND 305J4, PIN (E) WAS OPEN. BROKEN WIRE AT THE SPLICE. CONCLUDED TO BE FROM MISHANDLING. | | | | | | | |
| CORRECTIVE ACTION-THE SITE WAS ADVISED OF THE FAILURE CAUSE. IN ADDITION, 60/C REQUESTED THAT PERSONNEL BE INSTRUCT ED TO HANDLE CABLES MORE CAREFULLY. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-98-14-107F POWER CHANGEOVER SWITCH | FAR 27-08177 | 620308 | WALKER | YES | UNITED CONTROL | NO |
| FAILURE MODE-FAILED DURING OPERATION. FAILED TO TRANSFER FROM INTERNAL TO EXTERNAL. THE FAILURE WAS NOT CONFIRMED BY FAILURE ANALYSIS. | | | | | | | |

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GENERAL UNICS
CONVAIR DIVISION

15 JUN 1966

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|--------------------------------------|---|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| | | | | | | | 993797 |
| | CORRECTIVE ACTION-MAPCHE MAY HAVE BEEN IN ERROR. THE PROBLEM WILL BE KEPT UNDER SURVEILLANCE. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-9D-14-101P UMBILICAL RECEPTACLE | FAR 27-08181-3 | 920300 WTR | | YES NO | GRAY-HULEGARD | 994304 |
| | FAILURE MODE-ELECTRICAL SHORT CIRCUIT OCCURRED IN THE RECEPTACLE. | | | | | | |
| | CORRECTIVE ACTION-RELIABILITY RAR A-9D-14-832 RECOMMENDED A WATER TIGHT COVERING FOR DISCONNECTED RECEPTACLES AND P LUGS NOT IN USE. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-9D-14-102P UMBILICAL RECEPTACLE | FAR 27-08171-803 | 920300 WTR | | YES NO | GRAY-HULEGARD | 994305 |
| | FAILURE MODE-ELECTRICAL SHORT CIRCUIT OCCURRED IN THE RECEPTACLE. | | | | | | |
| | CORRECTIVE ACTION-RELIABILITY RAR A-9D-14-832 RECOMMENDED A WATER TIGHT COVERING FOR DISCONNECTED RECEPTACLES AND P LUGS NOT IN USE. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-9D-14-103P CONNECTOR | FAR CA-3108E-143-7A | 1120 WTR 920228 | | YES NO | 50/C | 993798 |
| | FAILURE MODE-ELECTRICAL OPEN CIRCUIT OCCURRED IN PLUG 703 ON THE SUSTAINER YAW ACTUATOR. | | | | | | |
| | CORRECTIVE ACTION-ENGINEERING HAS REDESIGNED THE CABLE. INSTALLATION PERSONNEL WERE INSTRUCTED TO ALLOW MORE CABLE SLACK IN THE CONNECTOR AREA. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | AD62-0021/DA678/LB-402-00-112 SWITCH-CHANGEOVER | COUNTDOWN 27-08178-801 | 1120 1-2 920225 | | YES NO | UNITED CONTROL 1877-1A | 994304 |
| | FAILURE MODE-OUT OF TOLERANCE. ELECTRICAL TRANSIENTS AT POWER CHANGEOVER TO EXTERNAL CAUSED THE AUTOPILOT PROGRAMME R TO GENERATE A PROGRAMMED PRESSURIZATION SYSTEM SQUIB FIRING SIGNAL. | | | | | | |
| | SYSTEM EFFECT-OPERATION TOO HIGH MOMENTARILY. | | | | | | |
| | VEHICLE EFFECT-COUNTDOWN ABORTED AND RESCHEDULED. LOS TANK PRESSURIZATION REVERTED TO NORMAL OPERATION. | | | | | | |
| | CORRECTIVE ACTION-UNKNOWN. | | | | | | |

GENERAL DYNAMICS
CONVAIR DIVISION

15 JUN 1966

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO |
|--|---|--------------------------------|---------------------|------------------|----------------|-------------------------------|
| ELECTRICAL-A/B POWER DISTRIBUTION | AR141-0-1-133/PC-450-DE-133 CONNECTOR | COMPOSITE-FACTORY | 133D 620224 | FACTORY | YES NO | 999379 |
| FAILURE MODE-ELECTRICAL OPEN. TELEMETRY MEASUREMENT UNIV. ERROR RATIO DEMODULATOR OUTPUT, DID NOT INDICATE A RESPONSE DURING THE TEST. PLUG P103 ON THE COMPUTER COMPARTMENT WAS DISCONNECTED. | | | | | | |
| SYSTEM EFFECT-OPERATION DOES NOT START. | | | | | | |
| VEHICLE EFFECT-COMPOSITE DELAYED. POST-COMPOSITE TESTING REQUIRED. | | | | | | |
| CORRECTIVE ACTION-P103 CONNECTED TO COMPUTER COMPARTMENT. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | AE62-0078/01-502-00-66 POWER CHANGEOVER SWITCH | COUNTDOWN | 66E 620225 | F | YES NO | 999310 |
| FAILURE MODE-FAIL DURING OPERATION. THE POWER INTERNAL INDICATOR WENT RED DURING THE TEST. | | | | | | |
| SYSTEM EFFECT-OPERATION DOES NOT START. MISSILE FAILED TO TRANSFER TO INTERNAL POWER. | | | | | | |
| VEHICLE EFFECT-COUNTDOWN ABORTED. | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-9D-20-112F DEMULATOR-COMPUTER-P/U SYSTEM. | FAR 27-43009-607 | 66E 620210 | WTR | YES 6D/C NO | 999182 |
| FAILURE MODE-OPEN ELECTRICAL. P/U SET REPORTEDLY FAILED DURING A CHECKOUT OF MAPCHE PER 27-98219. FAILURE WAS CAUSED BY AN EXPANDED FEMALE COAX RECEPTACLE PIN WHICH, WHEN COMBINED WITH COAX CABLE MOVEMENT, PRODUCED AN INTERMITTENT CONTACT BETWEEN LOX MANOMETER CAPACITANCE AND THE ERROR BRIDGE CIRCUIT. | | | | | | |
| CORRECTIVE ACTION-SINCE THE ORIGIN OF THE EXPANDED FEMALE COAX RECEPTACLE COULD NOT BE DETERMINED, NO CORRECTIVE ACTION WILL BE ATTEMPTED BUT SURVEILLANCE WILL BE MAINTAINED. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A99-04-3086-F CONNECTOR ELECT | FAR 27-45201-47 | 54F 620208 | FACTORY | YES NO | 999746 |
| FAILURE MODE-SHORT (ELECT)-BURNT PIN IN PLUG. TESTS SHOWED A BURNED SPOT ON SHEL OF HARNESS PLUG. FAILURE PROBABLY DUE TO HUMAN ERROR IN MATING THE CONNECTOR. | | | | | | |
| CORRECTIVE ACTION-FACTORY PERSONNEL ADVISED OF FAILURE AND GIVEN ADDITIONAL INSTRUCTION ON STANDARD PROCEDURES TO FOLLOW IN CONNECTION OF EQUIPMENT. | | | | | | |

15 JUN 1966

GENERAL DYNAMICS
CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | 3ITE TIME DIP | PRI OTH | VENDOR NAME VENDOR PART NO | |
|--|---|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| SUB-SYSTEM | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | HG-98-80-113F DEMOULATOR-COMPUTER COMPARATOR | FAR 27-43016-13 | 109D 020207 | ETR | YES NO | 50/C | 096101 |
| FAILURE MODE-ELECTRICAL OPEN-P/U SET REPORTEDLY FAILED DURING CHECKOUT. IT WAS FOUND A VALVE POSITION VOLTAGE NULL COULD NOT BE OBTAINED. A BREAK IN THE RESISTANCE ELEMENT WIRE RESULTED IN A VALVE LOWER LIMIT ANGLE ABOVE THE NOMINAL ANGLE. | | | | | | | |
| CORRECTIVE ACTION-VENDOR QUALITY CONTROL PERSONNEL TO CONTINUE A CLOSE SURVEILLANCE OF THESE PARTS IN ORDER TO MAINTAIN THEIR HIGH RELIABILITY. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | HG-98-14-095F CHANGE OVER SWITCH | FAR 27-06106-801 | 109D 020120 | ETR | YES NO | KINETICS | 094903 |
| FAILURE MODE-FAIL DURING OPERATION BY NOT TRANSFERRING FROM EXTERNAL TO INTERNAL. | | | | | | | |
| CORRECTIVE ACTION-RELIABILITY GENERATED RAR HG-98-14-800 WHICH RECOMMENDS DESIGN CHANGE TO ELIMINATE BALL NUT SCREW CONTAMINATION INCORPORATING A PROTECTIVE COVER. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | AE62-0074/ POWER CHANGE OVER SWITCH | COMPOSITE-FRD/OPL | 123D 020115 | B2 | YES NO | KINETICS | 094944 |
| FAILURE MODE-FAIL TO OPERATE AT PRESCRIBED TIME. RED INDICATIONS ON INTERNAL POWER FAILED TO TRANSFER AND APS FAILURE INDICATORS. | | | | | | | |
| SYSTEM EFFECT-OPERATION DOES NOT START. MISSILE FAILED TO TRANSFER TO INTERNAL POWER. TELEMETRY INDICATED A SATISFACTORY TRANSFER, THEREFORE, IT IS POSSIBLE THAT POWER TRANSFERRED BUT DID NOT SEND A SIGNAL TO LAUNCH CONTROL. AFTER SWITCH WAS REPLACED A SATISFACTORY TRANSFER WAS ACCOMPLISHED. | | | | | | | |
| VEHICLE EFFECT-COUNTDOWN ABORTED AND RESCHEDULED. | | | | | | | |
| CORRECTIVE ACTION-POWER CHANGE OVER SWITCH REPLACED. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | AE61-1275/LB-401-00-114 HARNES | FLIGHT | 114D 011228 | 1-2 803 | YES YES | | |
| FAILURE MODE-OPEN ELECTRIC. SECO COMMANDS AND PROPELLANT DEPLETION BACK-UP SIGNAL NOT RECEIVED AT ENGINE RELAY BOX. AN OPEN OR SHORT IN THE PERMANENT SPLICE AT STATION 1090 WHICH FEEDS SECO OUTPUT FROM A/P HIGH SWITCH 80 TO THE ENGINE RELAY BOX CONSIDERED MOST PROBABLY FAILURE MODE. | | | | | | | |
| SYSTEM EFFECT-NONE. THIS HARNES ONLY USED FOR PROGRAMMER SWITCH 80 OUTPUT. | | | | | | | |
| VEHICLE EFFECT-LATE SUSTAINER ENGINE SHUTDOWN. SUSTAINER ENGINE CONTINUED TO OPERATE UNTIL LOX DEPLETION. AS A RESULT | | | | | | | |

GENERAL DYNAMICS
CONVAIR DIVISION

15 JUN 1966

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|--|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| | LT, THE SATELLITE WAS INSERTED INTO A HIGHER THAN PLANNED ORBIT. ALSO, AGENA PRENATURE SEPARATION DESTRUCT DISABLE (NOMINALLY ACCOMPLISHED BY A/P SECO OUTPUT) WAS ACCOMPLISHED BY BACK-UP AT VECO. CORRECTIVE ACTION-SUBSEQUENT VEHICLES REVISED WITH AN INDEPENDENT PATH FOR PROPELLANT DEPLETION CUTOFF TO ENGINE RELAY BOX. ALSO, A THOROUGH EXAMINATION OF MISSILE HARNESS WAS PERFORMED, AND A REVIEW OF THE HARNESS SPLICING PROCEDURES WAS CONDUCTED. | | | | | | 094019 |
| ELECTRICAL-A/B POWER DISTRIBUTION | AA61-0212/P3-302-UD-36 | COUNTDOWN | 36E 611216 | 13 -40 | YES NO | | 094024 |
| FAILURE MODE-FAIL DURING OPERATION. DURING HOLD WHEN POWER CHANGEOVER SWITCH SWITCHED TO EXTERNAL, THE DC SWITCH WENT TO EXTERNAL BUT THE AC SWITCH REMAINED ON INTERNAL. HOLD HAD BEEN CALLED FOR EXCEEDING REDLINE TEMPERATURE AT BOOSTER LOX PUMP INLET. SYSTEM EFFECT-ERRATIC OPERATION. CHANGEOVER SWITCH PROBLEM RESULTED IN LOSS OF AC POWER TO VEHICLE SYSTEMS. VEHICLE EFFECT-COUNTDOWN ABORTED AND RESCHEDULED. CORRECTIVE ACTION-CHANGED POWER CHANGEOVER SWITCH. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-08-14-089F CHANGEOVER SWITCH | FAR 27-06177-3 | 36E 611216 | ETR | YES NO | UNITED CONTROL | 094004 |
| FAILURE MODE-ERRATIC OPERATION. SWITCH TRANSFER WAS PARTIAL A.C. PORTION FAILED TO TRANSFER. CORRECTIVE ACTION-VENDOR WILL MAKE ADEQUATE MECHANICAL DESIGN CHANGES TO THE SWITCH AND WILL INSTITUTE CLOSER QUALITY CONTROL SURVEILLANCE. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | AE61-1224 P1-803-00-03 HARNESS | FLIGHT | 3F 61-212 | 11 313.72 | YES NO | | 097314 |
| FAILURE MODE-ELECTRICAL SHORT. SHORT IN RETROCKETS IGNITER WIRING. SYSTEM EFFECT-NONE. VEHICLE EFFECT-NONE. CORRECTIVE ACTION-NONE. THIS TYPE OF SHORTING CAN OCCUR ON OCCASSIONS. THE CURRENT LIMITER IS SPECIFIED TO BURN OUT AND PREVENT ANY PROBLEMS IN OTHER USER SYSTEMS. | | | | | | | |

15 JUN 1986

GENERAL DYNAMICS
CONVAIR DIVISION

DIFFICULTIES PC-1EM-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI GTH | VENDOR NAME VENDOR PART NO | |
|--|---|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| ELECTRICAL-A/B POWER DISTRIBUTION | ARI41-0-1-1B1/PC-ACO-01-1B1 HARNESS | COMPOSITE-FACTORY | 121D 811204 | YES NO | YES NO | | 899332 |
| FAILURE MODE-FAIL TO OPERATE AT PRESCRIBED TIME. THE JETTISON SHROUD DISCRETE FUNCTION WAS NOT APPARENT AT THE SECO NO STAGE INTERFACE. THE MISSILE HARNESS HAD NOT BEEN MODIFIED TO INTERCHANGE GUIDANCE DISCRETE RELAYS 2 AND 10 IN ACCORDANCE WITH ECP 831, WHILE THE GUIDANCE TEST TAPES PROGRAMMING HAD BEEN CHANGED. | | | | | | | |
| SYSTEM EFFECT-NONE. | | | | | | | |
| VEHICLE EFFECT-COMPOSITE RE-SCHEDULED. POST-COMPOSITE TESTING REQUIRED. | | | | | | | |
| CORRECTIVE ACTION-MODIFIED MISSILE HARNESS IN ACCORDANCE WITH ECP 831. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 3P-9D-24-204-F HARNESS CONNECTOR | FAR 27-11404-3 | 110D 811130 | PMR YES NO | YES NO | | 899181 |
| FAILURE MODE-STRUCTURAL. THE PINS ON THE TWO PIECE PIN ASSEMBLY IN PLUG 2P1 WERE NOT FASTENED SECURELY. ONE PIN WAS MISSING. | | | | | | | |
| CORRECTIVE ACTION-NO ACTION WARRANTED AS FAR AS CHANGING THE TYPE CONNECTOR AS ONLY 6 MORE MISSILES ARE INVOLVED. C ONNECTOR TYPE CHANGES AT 27-0006-13 AND ON. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-9D-14-098F CHANGEOVER SWITCH | FAR 27-08108-801 | 114D 811126 | WTR YES NO | YES NO | UNITED CONTROL CORP. | 894914 |
| FAILURE MODE-CONTAMINATION. ELECTRICAL SHORT CIRCUIT OF THE SWITCHES RELAY COILS PREVENTING SWITCH TRANSFER FROM EX TERNAL TO INTERNAL. HIGH SODIUM CHLORIDE WATER SOLUTION FOUND WITHIN THE SWITCH CAUSING SHORT CIRCUITING. | | | | | | | |
| CORRECTIVE ACTION-RELIABILITY RAR ACTION RECOMMENDED QUALITY CONTROL INSPECTION OF SWITCH SEALS ADEQUACY. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | DA633/02-68M-02-03 CANNON CONNECTOR. | COMPOSITE-PRD/DPL | 3P 811115 | 6 YES NO | YES NO | | 896348 |
| FAILURE MODE-ERRATIC OPERATION. INTERMITTENT CONNECTION IN CANNON CONNECTOR CAUSED THE LOX AIRBORNE FILL AND DRAIN VALVE TO STAY OPEN. | | | | | | | |
| SYSTEM EFFECT-IMPROPER DISCRETE SIGNAL. | | | | | | | |
| VEHICLE EFFECT-COMPOSITE DELAYED. LOX HAD TO BE DRAINED MANUALLY. | | | | | | | |
| CORRECTIVE ACTION-REPAIR CANNON CONNECTOR. | | | | | | | |

15 JUN 1959

GENERAL DYNAMICS
CONVAIR DIVISION

DIFFICULTIES REVIEW ELECTRICAL SYSTEM-AIRBORNE

| SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO |
|---|---|--------------------------------|---------------------|------------------|----------------|-------------------------------|
| ELECTRICAL-A/B POWER DISTRIBUTION | DAB29/L1-4MO-19-108 HARNESS | COMPOSITE-FRD/DPL | 1780 81113 | 1-1 | YES NO | |
| FAILURE MODE-OPEN (ELECT.). START TANKS FAILED TO PRESSURIZE. FAILURE CAUSED BY BROKEN SPLICE IN THE HARNESS TO THE SOLENOID CONTROLLING PRESSURIZATION OF THE START TANKS. | | | | | | |
| SYSTEM EFFECT-IMPROPER DISCRETE SIGNAL. | | | | | | |
| VEHICLE EFFECT-COMMIT SEQUENCE AND COMPOSITE ABORTED AND RESCHEDULED. ENGINE TANKS DID NOT PRESSURIZE. | | | | | | |
| CORRECTIVE ACTION-SPLICE REPAIRED. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-9F-20-101-F LOZ PROBE | FAR 27-04240-813 | 81114 | NAF8 | YES NO | |
| FAILURE MODE-OPEN (ELECT.). UNIT WAS REJECTED BECAUSE THE TOPPING LOW ELEMENT WAS OPEN-CIRCUITED. CAUSE OF BREAKAGE IS UNDETERMINED. | | | | | | |
| CORRECTIVE ACTION-PRIOR CORRECTIVE ACTION RUGGEDIZED THIS UNIT. NO FURTHER FAILURES SINCE MID 1962. NO FURTHER ACTION REQUIRED. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | HG-98-04-3034 HARNESS | FAR 27-62711-925 | 930 811101 | ETR | YES GO/C NO | |
| FAILURE MODE-OPEN (ELECT.)-WIRE 2N33A22 GOING TO PIN B OF PROS, FEEDBACK TRANSDUCER HARNESS WAS OPEN AND TRACED TO A LOOSE WIRE AT A PERMANENT (CRIMPED) SPLICE. | | | | | | |
| CORRECTIVE ACTION-MANUFACTURING PROCESS REVISED TO INCLUDE TRAINING REQUIREMENTS FOR PERSONNEL ENGAGED IN INSPECTION AND MANUFACTURE OF CRIMPED AND SPLICED CONNECTIONS- SPLICING TOOLS TO BE CERTIFIED MONTHLY RATHER THAN EVERY THREE MONTHS. MANDATORY THAT ONLY CERTIFIED PERSONNEL BE ALLOWED TO SPLICE PRODUCTION HARNESSES-ADDITIONAL DIRECTIVES ISSUED ON PROPER HANDLING TECHNIQUES FOR HARNESSES OVER TEN FEET IN LENGTH. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | AE81-0784/L2-402-00-105 HARNESS | FLIGHT | 1050 811021 | 1-2 100 | YES YES | |
| FAILURE MODE-OPEN (ELECT.)-THERE WAS AN OPEN IN THE ROLL SIGNAL LEAD BETWEEN THE GYRO PACKAGE AND THE FILTER-SERVOAMP PACKAGE. | | | | | | |
| SYSTEM EFFECT-IMPROPER ANALOG SIGNALS-THE OPEN RESULTED IN LOSS OF THE ROLL SIGNAL TO THE VEHICLE. | | | | | | |
| VEHICLE EFFECT-LOSS OF VEHICLE STABILITY-THE VEHICLE BECAME UNSTABLE IN ROLL BEGINNING AT 100 SECONDS. PITCH AND YAW STABILITY WERE MAINTAINED. THERE WAS NO EFFECT ON THE MISSION WHICH WAS SUCCESSFUL. | | | | | | |

GENERAL NAMICS
CONVAIR DIVISION

13 JUN 1966

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|---|--------------------------------|---------------------|------------------|------------|-------------------------------|---------|
| CORRECTIVE ACTION-UNKNOWN. | | | | | | | 095037 |
| ELECTRICAL-A/B POWER DISTRIBUTION | RA-9B-24-205-F HARNES | FAR 27-61967-801 | 117D 611021 | AMR | YES NO | | 091002 |
| FAILURE MODE-ELECTRICAL OPEN. AGENA PAYLOAD DID NOT RECEIVE AN INITIATE SEPARATION SEQUENCE SIGNAL FROM THE FLIGHT CONTROL SYSTEM. WIRE 2B15142E WAS OPEN TO PIN A, PLUG 30103 IN GE DECODER. WIRE MA) PULLED OUT OF SPLICE. CAUSE DUE TO IMPROPER SIZE UNI-RINGS USED IN ASSEMBLY. THIS WAS A GE MOD 2 GUIDANCE SYSTEM. | | | | | | | |
| CORRECTIVE ACTION-SPLICING AND INSPECTION PROCEDURES CHANGED TO INSURE AGAINST REPETITION OF THIS FAILURE. | | | | | | | 096029 |
| ELECTRICAL-A/B POWER DISTRIBUTION | AC-61-0678/51-808-A8-01 WIRING | CAPTIN | IF 611010 | BYC 0 | YES NO | YES ACOUSTICA | |
| FAILURE MODE-ELECTRICAL OPEN. THE SERVO-FEEDBACK VOLTAGE APPROACHED APPROXIMATELY 50 PERCENT OF NORMAL START TRANSIENT, AND THEN SLOWLY DECAYED TO 2.46 VDC AT 17 SECONDS WHERE IT REMAINED STEADY. POST TEST INSPECTION REVEALED A BROKEN LEAD BETWEEN THE VALVE POSITION TRANSDUCER AND THE ACOUSTICA COMPUTER. | | | | | | | |
| SYSTEM EFFECT-ERRATIC OPERATION. | | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | | |
| CORRECTIVE ACTION-THE BREAK WAS CORRECTED AND ANOTHER FUNCTIONAL TEST PERFORMED. THE PU VALVE AGAIN DID NOT POSITION ITSELF PROPERLY AND THE SERVO FEEDBACK VOLTAGE STILL INDICATED INCORRECTLY. THE COMPUTER WAS SUBSEQUENTLY REPLACED AND RETURNED TO THE VENDOR FOR A COMPLETE CHECKOUT. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A681-0798/P1-303-00-23 PU CIRCUITRY | FLIGHT | 23E 611002 | ETP 206 | YES NO | | 0917814 |
| FAILURE MODE-SHORT (ELECT). A SHORT IN THE CIRCUITRY BETWEEN THE LOX SENSOR AND THE COMPUTER RESULTED IN AN ERRONEOUS US LOX SENSOR SIGNAL AT STATION 6. THE SHORT OCCURRED 15 SECONDS AFTER STATION 5 UNCOVERED. | | | | | | | |
| SYSTEM EFFECT-IMPROPER ANALOG SIGNALS. BECAUSE OF THE ERRONEOUS UNCOVERED INDICATION OF LOX SENSOR 6, THE PU SYSTEM WAS UNABLE TO CORRECT THE LOX RICH ERROR INDICATED AT STATION 5. IN FACT, THE LOX RICH ERROR WAS INCREASED WHEN THE PU VALVE WAS MOVED TO THE OPEN LIMIT WHERE IT REMAINED UNTIL THE MONOSTABLE RESET AT 218.9 SECONDS. | | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | | |
| CORRECTIVE ACTION-NONE. | | | | | | | |

GENERAL DYNAMICS
CONVAIR DIVISION

15 JUN 1966

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | DATE DIF | PRI OTH | VENDOR NAME VENDOR PART NO |
|---|---|--------------------------------|---------------------|----------|------------|-------------------------------------|
| ELECTRICAL-A/B POWER DISTRIBUTION | A-8H-14-084F UMBILICAL PLUG ADAPTER | FAR | 48E 810918 | FORBES | YES NO | YES GRAY-HULEGARD NO 982-700-803 |
| FAILURE MODE-ELECTRICAL SHORT. EJECTION SOLENOID WAS SHORTED. | | | | | | |
| CORRECTIVE ACTION-RELIABILITY GENERATED RAR A8H-14-850 RECOMMENDING QUALITY CONTROL INVESTIGATE IMPROVED VENDOR MANUFACTURING TECHNIQUES AND 60/C INSPECTION. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-14-083F HARNESS | FAR 27-81874-801 | 810915 | ETR | YES NO | YES 60/C |
| FAILURE MODE-ELECTRICAL OPEN CIRCUIT FROM A BROKEN HARNESS WIRE CONNECTION TO PLUG 30S019 P605 CAUSING YAW HARD OVER OF BOOSTER ENGINE V1. | | | | | | |
| CORRECTIVE ACTION-GENERATION OF RAR 98-14-843 RECOMMENDING IMPROVED 60/C QUALITY CONTROL OF HARNESS POTTING TECHNIQUES. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-88-20-102-F LO2 PROBE | FAR 27-04240-813 | 810912 | SYCAMORE | YES NO | |
| FAILURE MODE-OPEN (ELECT). UNIT WAS REJECTED BECAUSE THE TOPPING LO-1 ELEMENT WAS OPEN-CIRCUITED. CAUSE OF BREAKAGE IS UNDETERMINED. | | | | | | |
| CORRECTIVE ACTION-PRIOR CORRECTIVE ACTION RECOGNIZED THIS UNIT. NO FURTHER FAILURES SINCE MID 1962. NO FURTHER ACTION REQUIRED. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-8P-20-084 LO2 LEVEL SENSOR ASSY. | FAR 27-04240-813 | 34E 810911 | WARREN | YES NO | |
| FAILURE MODE-OPEN (ELECT). UNIT WAS REJECTED DURING MISSILE CHECKOUT. | | | | | | |
| CORRECTIVE ACTION-NONE. FAILURE WAS NOT CONFIRMED. | | | | | | |

15 JUN 1988

GENERAL UNICS
CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|--|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| ELECTRICAL-A/B POWER DISTRIBUTION | AE61-0795/L1-401-00-108 POWER CHANGEOVER-SWITCH | FLIGHT | 1080 610809 | L1 0 | NO NO | NO KINETICS | 897370 |
| <p>FAILURE MODE-FAILURE DURING OPERATION AT 0.2-0.5 SECONDS. ALL AC AND DC POWER WAS LOST AT THE VEHICLE DUE TO CYCLING THE PWR CHANGEOVER SW TO GROUND. SINCE THE POWER UNBILICAL HAD DISCONNECTED NO GROUND POWER WAS AVAILABLE. CYCLING OF THE SW WAS INITIATED BY THE LAUNCH CONTROL LOGIC AFTER IMPROPER UNBILICAL EJECT SEQUENCE.</p> <p>SYSTEM EFFECT-OPERATION STOPS PREMATURELY. ALL POWER WAS LOST TO ALL VEHICLE SYSTEMS.</p> <p>VEHICLE EFFECT-PREMATURE PROPULSION SHUTDOWN. ONE OF THE MORE SIGNIF CANT EFFECTS OF THE LOSS OF POWER WAS THE SHUT DOWN OF THE PROPULSION SYSTEM AFTER 18 INCHES OF VEHICLE RISE CAUSING THE VEHICLE TO FALL BACK INTO THE LAUNCHER AND SELF DESTRUCT.</p> <p>CORRECTIVE ACTION-(1) COMMIT SEQUENCE LOCK-UP IN LOGIC AFTER RELEASE VEHICLE SIGNAL. (2) PREVENT COMMIT STOP GENERATION IN LOGIC UNTIL MISSILE AWAY IS RECEIVED (OR AUTOMATIC ABORT). (3) PREVENT MISSILE AWAY UNTIL ALL UNBILICALS HAVE BEEN EJECTED. (4) PROCEDURAL CHANGES TO UNBILICAL INSTALLATION.</p> | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-14-0877 HARNES | FAR 27-61020-839 | 30E 610824 | ETR | YES NO | 60/C | 894330 |
| <p>FAILURE MODE-ELECTRICAL OPEN CIRCUIT OCCURRED IN WIRE 2E480A22 BETWEEN PLUG 30RUMP303 PIN SMALL (B) AND PLUG 30EJ1 PIN 30.</p> <p>CORRECTIVE ACTION-RELIABILITY RAR 98-14-644 WAS GENERATED REQUESTING 60/C MANUFACTURING AND QUALITY CONTROL IMPROVE THEIR CONSTRUCTION AND INSPECTION PROCEDURES.</p> | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-14-0887 HARNES | FAR 27-61023-937 | 23E 610824 | ETR | YES NO | 60/C | 894307 |
| <p>FAILURE MODE-ELECTRICAL OPEN CIRCUIT OCCURRED IN WIRE 2N873A20 BETWEEN PLUG 30R21P1-2 AND PLUG 800J12-39. CORRECTIVE ACTION-RELIABILITY RAR 98-14-644 WAS GENERATED REQUESTING 60/C MANUFACTURING AND QUALITY CONTROL IMPROVE THEIR CONSTRUCTION AND INSPECTION PROCEDURES.</p> <p>CORRECTIVE ACTION-RELIABILITY RAR 98-14-644 WAS GENERATED REQUESTING 60/C MANUFACTURING AND QUALITY CONTROL IMPROVE THEIR CONSTRUCTION AND INSPECTION PROCEDURES.</p> | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | DA393 HARNES | COMPOSITE-FRD/DPL | 1010 610821 | B-3 | YES NO | | |
| <p>FAILURE MODE-OUT OF SPECIFICATION. THE ENGINE TANKS DID NOT VENT UNTIL COMMIT STOP PLUS 142 SECONDS. INSPECTION REVEALED A CROSS CONNECT.</p> | | | | | | | |

13 JUN 1966

GENERAL DYNAMICS
CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|--|--|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| SYSTEM EFFECT-OPERATION STARTS TOO LATE. | | | | | | | 000000 |
| VEHICLE EFFECT-NONE. | | | | | | | |
| CORRECTIVE ACTION-REMOVE CROSS CONNECT. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-14-079 HARNESS | FAR 27-61799-817 | 88D 610817 | ETR | YES NO | 50/C | 004332 |
| FAILURE MODE-ELECTRICAL OPEN FROM INCORRECT USE OF WIRE STRIPPING TOOLS RESULTING IN DAMAGED WIRING. | | | | | | | |
| CORRECTIVE ACTION-REINSPECTION OF APPLICABLE MISSILES FOR DISCREPANCY. RETRAINING OF MANUFACTURING AND INSPECTION PERSONNEL. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-14-079 HARNESS | FAR 27-61020-802 | 26E 610816 | ETR | YES NO | 50/C | 004334 |
| FAILURE MODE-ELECTRICAL OPEN-INCORRECT USE OF WIRE STRIPPING TOOLS RESULTING IN DAMAGED WIRING. | | | | | | | |
| CORRECTIVE ACTION-REINSPECTION OF APPLICABLE MISSILES FOR DISCREPANCY. RETRAINING OF MANUFACTURING AND INSPECTION PERSONNEL. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-14-079 HARNESS | FAR 27-90599 | 23E 610811 | ETR | YES NO | 50/C | 004333 |
| FAILURE MODE-ELECTRICAL OPEN-INCORRECT USE OF WIRE STRIPPING TOOLS RESULTING IN DAMAGED WIRING. | | | | | | | |
| CORRECTIVE ACTION-REINSPECTION OF APPLICABLE MISSILES FOR DISCREPANCY. RETRAINING OF MANUFACTURING AND INSPECTION PERSONNEL. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A61-0275/FC-450-01-116 CONNECTOR-ELECTRICAL | COMPOSITE-FACTORY | 116D 610808 | | YES NO | | |
| FAILURE MODE-ELECTRICAL OPEN. THE ENGINE CUTOFF SIGNALS FROM THE FLIGHT PROGRAMMER TO THE TLN PMS WERE NOT RECEIVED BY THE TELEMETRY PACKAGE. PLUS 14 WAS FOUND TO HAVE BEEN DISCONNECTED DURING THE COMPOSITE TEST. | | | | | | | |
| SYSTEM EFFECT-NONE. | | | | | | | |
| VEHICLE EFFECT-COMPOSITE RESCHEDULED. COMPOSITE RE-RUN REQUIRED. | | | | | | | |

GENERAL MANICS
CONVAIR DIVISION

15 JUN 1966

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|---|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| CORRECTIVE ACTION-RECONNECTED PLUG. | | | | | | | 090792 |
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-14-079 HARNES | FAR 27-61074-001 | 21E 61072 | ETR | YES NO | YES 60/C | 094337 |
| FAILURE MODE-ELECTRICAL OPEN-IMPROPER CRIMPING AND LOCATION OF SOLDERLESS SPLICES. | | | | | | | |
| CORRECTIVE ACTION-REINSPECTION OF APPLICABLE MISSILES FOR DISCREPANCY. RETRAINING OF MANUFACTURING AND INSPECTION PERSONNEL. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-14-079 HARNES | FAR 27-61759-017 | 80D 610724 | ETR | YES NO | YES 60/C | 094336 |
| FAILURE MODE-ELECTRICAL OPEN-IMPROPER HARNES ROUTING RESULTING IN OVERSTRESSED MECHANICAL FAILURE. | | | | | | | |
| CORRECTIVE ACTION-REINSPECTION OF APPLICABLE MISSILES FOR DISCREPANCY. RETRAINING OF MANUFACTURING AND INSPECTION PERSONNEL. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-9K-20-070F LOC SENSOR | FAR 27-04240-013 | 29E 610724 | FAIRCHILD D | YES NO | | 093080 |
| FAILURE MODE-OPEN, ELECTRICAL. FAILURE WAS CONFIRMED BUT NO CAUSE DETERMINED. FAILURE WAS ELECT. OPEN ON BOTH SIDES OF TOPPING HIGH TRANSDUCER. | | | | | | | |
| CORRECTIVE ACTION-CORRECTIVE ACTION FROM PREVIOUS FAILURES HAS INITIATED REDESIGN FOR RUGGEDIZING THE PROBE. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-14-079 HARNES | FAR 27-61023-031 | 21E 610721 | ETR | YES NO | YES 60/C | 094333 |
| FAILURE MODE-ELECTRICAL OPEN-IMPROPER HARNES ROUTING RESULTING IN OVERSTRESSED MECHANICAL FAILURE. | | | | | | | |
| CORRECTIVE ACTION-REINSPECTION OF APPLICABLE MISSILES FOR DISCREPANCY. RETRAINING OF MANUFACTURING AND INSPECTION PERSONNEL. | | | | | | | |

GENERAL MANICS
CONVAIR DIVISION

15 JUN 1988

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SNO-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF TIME | SITE TIME DIF | PRI OIM | VENDOR NAME VENDOR PART NO | |
|---|---|--------------------------------|--------------------------|------------------|------------|-------------------------------|--------|
| ELECTRICAL-A/B POWER DISTRIBUTION | AA61-0090/PE-4MO-02-111 ELECTRICAL HARNESS-CONNECTOR | COMPOSITE-FRD/OPL | 1110 610719 | E7H -79 | YES NO | | 093240 |
| FAILURE MODE-CONTAMINATION. PROBLEM WAS TRACED TO MOISTURE IN THE PLUG ON THE CABLE BETWEEN PU CARTRIDGE AND LOG MAIN METER. | | | | | | | |
| SYSTEM EFFECT-IMPROPER ANALOG SIGNALS. PU WAS REPORTED NO GO BECAUSE ERROR DEMODULATOR OUTPUT WAS TOO POSITIVE, PLUS 9.7 VOLTS. | | | | | | | |
| VEHICLE EFFECT-COMPOSITE DELAYED. PROBABLE HOLD INFERRED FROM INSUFFICIENT INFO. | | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | AE61-0244/L2-404-00-97 HARNESS | FLIGHT | 970 610712 | 1-2 139 | YES NO | | 097264 |
| FAILURE MODE-SHORT (ELECTRICAL) AN A.C. SHORT OCCURRED IN PHASE D AND/OR C. SUSPECTED LOCATION OF THIS SHORT IS THE S.E. GUIDANCE PULSE BEACON OR ITS HARNESS. DURATION OF THE SHORT WAS 0.2 SECONDS. | | | | | | | |
| SYSTEM EFFECT-OPERATION TOO LOW. MEASURED PHASE A VOLTAGE DROPPED TO 107.8 VAC AND THE PROGRAMMER RECYCLED TO BECO. POST FLIGHT TESTS INDICATED THAT THE ACTUAL PHASE A VOLTAGE WAS 65 VOLTS OR BELOW. | | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | | |
| CORRECTIVE ACTION-NONE. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | AE61-0244/L2-404-00-97 CONNECTOR | FLIGHT | 970 610712 | WTR 43 | YES NO | | 097263 |
| FAILURE MODE-OPEN (ELECT). OPEN IN THE CIRCUITRY BETWEEN THE FUEL MANOMETER AND THE BRIDGE ERROR DETECTOR OUTPUT (HOLD PROBABLE) OR A SHORT BETWEEN THE LOG MANOMETER AND THE BRIDGE ERROR DETECTOR. DURATION 43 TO 50 SECONDS. BMC TYP E T CONNECTORS SUSPECTED. | | | | | | | |
| SYSTEM EFFECT-IMPROPER ANALOG SIGNAL. THE ERROR DEMODULATOR OUTPUT SIGNAL WENT FROM A FUEL RICH ERROR INDICATION TO THE LOG RICH LIMIT (PLUS 5 VOLTS) AT 43 SECONDS AND BECAME VERY NOISY. THE PU VALVE RESPONDED CORRECTLY. RETURNED TO NORMAL INDICATION AT 50 SECONDS. | | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | | |
| CORRECTIVE ACTION-SPECIAL CARE WILL BE GIVEN TO THE INSPECTION AND CHECKOUT OF ALL CABLES AND CONNECTORS TO ENSURE SOLID CONTACT. | | | | | | | |

GENERAL WAREHOUSE
CONVAIR DIVISION

15 JUN 1966

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE OF TIME | 811E TIME DIFF | PRI OTH | VENDOR NAME VENDOR PART NO |
|---|---|--------------------------------|-------------------------|-------------------|------------|-------------------------------|
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-14-079 HARNESSES | FAR 27-12261-803 | 22E 610701 | ETR | YES NO | 60/C |
| FAILURE MODE-ELECTRICAL OPEN. FROM INCORRECT USE OF WIRE STRIPPING TOOLS RESULTING IN DAMAGED WIRING. | | | | | | |
| CORRECTIVE ACTION-REINSPECTION OF APPLICABLE MISSILES FOR DISCREPANCY. RETRAINING OF MANUFACTURING AND INSPECTION PERSONNEL. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | M1-90-20-080F MANDREL | FAR 27-43016-19 | 97D 610618 | WTR | YES NO | 60/C |
| FAILURE MODE SHORT (ELECT.). LOW MANOMETER GAVE EVIDENCE OF A SHORT WHEN THE MISSILE LOW TANK WAS FULL AND AT FLIGHT PRESSURE. FAILURE WAS VERIFIED. A PUNCTURE, OF SMALL DIAMETER, THROUGH THE DIELECTRIC COATING EXISTED NEAR THE TOP OF THE MANDREL. | | | | | | |
| CORRECTIVE ACTION-NOT KNOWN. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-14-079 HARNESSES | FAR 27-61824-819 | 17E 610615 | ETR | YES NO | 60/C |
| FAILURE MODE-ELECTRICAL OPEN-IMPROPER CRIMPING AND LOCATION OF SOLDERLESS SPLICES. | | | | | | |
| CORRECTIVE ACTION-REINSPECTION OF APPLICABLE MISSILES FOR DISCREPANCY. RETRAINING OF MANUFACTURING AND INSPECTION PERSONNEL. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | AAS1-0073/P1-501-00-17 HARNESSES | COUNTDOWN | 17E 610614 | 11 -7200 | YES NO | 60/C |
| FAILURE MODE-SHORT (ELECT.). RSC ARMED CONDITION WAS NOT OBSERVED ON THE PANEL WHEN SAFE-ARM SWITCH WAS SWITCHED TO ARM. LACK OF PROPER INDICATION ATTRIBUTED TO A SHORT OF A MISSILE HARNES WIRE TO THE B1 POD DOG-HOUSE FAIRING. | | | | | | |
| SYSTEM EFFECT-IMPROPER DISCRETE SIGNAL. INDICATION AS TO ARM OR SAFE CONDITION OF RSC TO THE BLOCKHOUSE PANEL WAS INCORRECT. | | | | | | |
| VEHICLE EFFECT-COUNTDOWN DELAYED 220 MINUTES. | | | | | | |
| CORRECTIVE ACTION-HARNESSES REPAIRED TO ELIMINATE SHORT. | | | | | | |

GENERAL JAMICS
CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO |
|--|---|------------------------------------|---------------------|------------------|------------|-------------------------------|
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-14-079 HARNES | FAR 27-81890-851 | 1110 810810 | ETR | YES NO | 60/C |
| FAILURE MODE-ELECTRICAL OPEN-IMPROPER CRIMPING AND LOCATION OF SOLDERLESS SPLICES. | | | | | | |
| CORRECTIVE ACTION-REINSPECTION OF APPLICABLE MISSILES FOR DISCREPANCY. RETRAINING OF MANUFACTURING AND INSPECTION PERSONNEL. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | DA499/L2-4MO-02-97 HARNES | COMPOSITE-PRD/DPL 970 810807 | 17E 810808 | ETR | YES NO | 60/C |
| FAILURE MODE-SHORT(ELECT.). PITCH RATE GYRO SIGNAL WIRE SHORTED TO THE V1 YAW ENGINE POSITION SIGNAL WIRE. | | | | | | |
| SYSTEM EFFECT-IMPROPER ANALOG SIGNALS. THE PITCH RATE GYRO WAS SLAVED TO THE V1 YAW COMMAND SIGNALS. | | | | | | |
| VEHICLE EFFECT-NONE | | | | | | |
| CORRECTIVE ACTION-REPAIRED SHORT. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-14-079 HARNES | FAR 27-17251-805 | 17E 810808 | ETR | YES NO | 60/C |
| FAILURE MODE-ELECTRICAL OPEN. IMPROPER CRIMPING AND LOCATION OF SOLDERLESS SPLICES. | | | | | | |
| CORRECTIVE ACTION-REINSPECTION OF APPLICABLE MISSILES FOR DISCREPANCY. RETRAINING OF MANUFACTURING AND INSPECTION PERSONNEL. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-14-079 HARNES | FAR 27-81872-803 | 910331 | FACTORY | YES NO | 60/C |
| FAILURE MODE-ELECTRICAL OPEN-POOR SOLDER TECHNIQUES. | | | | | | |
| CORRECTIVE ACTION-REINSPECTION OF APPLICABLE MISSILES FOR THE DISCREPANCY. RETRAINING OF MANUFACTURING AND INSPECTION PERSONNEL. | | | | | | |

15 JUN 1966

GENERAL AMICS
CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | SITE TIME DIP | PRI OIM | VENDOR NAME VENDOR PART NO | |
|---|---|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| ELECTRICAL-A/B POWER DISTRIBUTION | 9D-14-089 CHANCEOVER SWITCH | FAR 27-08177-1 | 810530 | WTR | NO | KINETICS | 094903 |
| FAILURE MODE-FAILED DURING OPERATION FROM WIRING ERRORS EXTERNAL TO THE SUBJECT SWITCH. | | | | | | | |
| CORRECTIVE ACTION-NONE. THIS FAILURE WAS SECONDARY. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 9D-14-079 HARNESS | FAR 27-61828-803 | 17E 810529 | ETR | YES NO | GO/C | 094343 |
| FAILURE MODE-ELECTRICAL OPEN RESULTING FROM POOR SOLDER TECHNIQUES. | | | | | | | |
| CORRECTIVE ACTION-REINSPECTION OF APPLICABLE MISSILES FOR DISCREPANCY. RETRAINING OF MANUFACTURING AND INSPECTION PERSONNEL. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | AE61-0241/PS-502-00-18 HARNESS | FLIGHT | 18E 810526 | 13 | YES NO | | 096488 |
| FAILURE MODE-SHORT (ELECT). A SHORT OCCURRED IN THE RETROCKET CIRCUITRY AT SOME TIME PRIOR TO RECEIVING THE FIRING SIGNAL. A RETROCKET COVER OF THE TYPE USED ON 18E WAS FOUND IN THE COMPLEX 13 WATER PIT 6 DAYS AFTER THE FLIGHT. POSSIBLE THAT SHORT RESULTED FROM AERODYNAMIC HEATING AS A RESULT OF COVER MISSING. COVER MAY NOT HAVE BEEN FROM 18E. | | | | | | | |
| SYSTEM EFFECT-NONE. | | | | | | | |
| VEHICLE EFFECT-NONE. FAILURE OF RETROCKETS TO FIRE HAD NO ADVERSE EFFECT ON MISSION ACCOMPLISHMENT. | | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 9B-14-079 HARNESS | FAR 27-12253-1 | 17E 810526 | ETR | YES NO | GO/C | 094343 |
| FAILURE MODE-ELECTRICAL OPEN. POOR SOLDER TECHNIQUES. | | | | | | | |
| CORRECTIVE ACTION-REINSPECTION OF APPLICABLE MISSILES FOR THE DISCREPANCY. RETRAINING OF MANUFACTURING AND INSPECTION PERSONNEL. | | | | | | | |

13 JUN 1986

GENERAL DYNAMICS
CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF TIME DIF | SITE ETR | PRI YES 60/C NO | VENDOR NAME VENDOR PART NO |
|--|---|--------------------------------|------------------------------|-------------|-----------------------|-------------------------------|
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-14-079 HARNESS | FAR 27-82731-801 | 17E 610520 | ETR | YES 60/C NO | 894340 |
| FAILURE MODE-ELECTRICAL OPEN-POOR SOLDER TECHNIQUES. | | | | | | |
| CORRECTIVE ACTION-REINSPECTION OF APPLICABLE MISSILES FOR THE DISCREPANCY. RETRAINING OF MANUFACTURING AND INSPECTION PERSONNEL. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-14-079 HARNESS | FAR 27-82732-897 | 17E 610523 | ETR | YES 60/C NO | 894342 |
| FAILURE MODE-ELECTRICAL OPEN. POOR SOLDERING TECHNIQUES. THIS FAILURE MODE IS APPLICABLE TO ONE ADDITIONAL PART NUMBER ON FAR 98-14-079. | | | | | | |
| CORRECTIVE ACTION-REINSPECTION OF APPLICABLE MISSILES FOR THE DISCREPANCY. RETRAINING OF MANUFACTURING AND INSPECTION PERSONNEL. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-14-069 HARNESS | FAR 27-11376 | 610509 | ETR | YES 60/C NO | 894347 |
| FAILURE MODE-STRUCTURAL FAILURE. CAUSED BY OVERTORQUING OF A HARNESS CONNECTOR MOUNTING CLAMP. | | | | | | |
| CORRECTIVE ACTION-MODIFICATION OF THIS HARNESS TO PROVIDE PLUGS WITH SAFETY WIRE HOLES WHICH SHOULD ALLEVIATE THE CONDITION. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-14-078 HARNESS | FAR 27-81820-891 | 610508 | ETR | YES 60/C NO | 894348 |
| FAILURE MODE-ELECTRICAL OPEN-INTERMITTENT CIRCUIT RESULTING FROM POOR SOLDER CONNECTION CAUSE THE FAILURE IN THE CONTROL AND POSITIONING OF THE GUIDANCE PLATFORM. | | | | | | |
| CORRECTIVE ACTION-RELIABILITY (RAR-98-14-093) REQUIRING POSITIVE QUALITY CONTROL OF THE SOLDERING OF THIS PART. INSPECTION OF ALL APPLICABLE MISSILES FOR THIS WEAKNESS. | | | | | | |

GENERAL DYNAMICS
CONVAIR DIVISION

15 JUN 1966

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | SITE TIME DIP | PRI OTH | VENDOR NAME VENDOR PART NO |
|---|---|--------------------------------|---------------------|------------------|------------|-------------------------------|
| ELECTRICAL-A/B POWER DISTRIBUTION | 9K-14-071 CHANGEOVER SWITCH | FAR 27-08177-1 | 610503 | FAIRCHILD D | YES NO | 894908 |
| FAILURE MODE-FAILURE DURING OPERATION OCCURRED WHEN SWITCH FAILED TO COMPLETE THE TRANSFER. | | | | | | |
| CORRECTIVE ACTION-ECP SUBMITTAL REQUESTING DASH NUMBER CHANGE OF SWITCH TO INCLUDE CHANGES IN SWITCHING SEQUENCE TH AT WILL PREVENT 25 AMPERE CONTACTS FROM SHARING HIGH CURRENT LOAD. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 9K-14-085 UMBILICAL RECEPTACLE | FAR 27-38171-807 | 610422 | FAIRCHILD D | YES NO | 894348 |
| FAILURE MODE-ELECTRICAL OPEN. POOR SOLDERING OF WIRE TO RECEPTACLE PIN, MAKING INTERMITTENT CONNECTION. | | | | | | |
| CORRECTIVE ACTION-UPDATING OF APPLICABLE E D S AND DRAWINGS TO INCLUDE IMPROVED SOLDERING TECHNIQUES. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A681-0059/P4-4CO-01-100 AIRBORNE BATTERY HARNESS, RANGE BA FETV | COMPOSITE-J FACT | 100D 610418 | 14 0 | YES NO | 895681 |
| FAILURE MODE-ELECTRICAL OPEN. NEGATIVE LEADS FROM RSC RECEIVERS TO BATTERIES WERE NOT INSTALLED. POWER TO RSC SYSTEM LOST WHEN UMBILICALS DISCONNECTED. | | | | | | |
| SYSTEM EFFECT-OPERATION DOES NOT START. RSC SYSTEM DID NOT OPERATE BECAUSE OF LACK OF POWER. | | | | | | |
| VEHICLE EFFECT-COMMANDS NOT RECEIVED. TEST COMMANDS TO RANGE SAFETY SYSTEM NOT RECEIVED BECAUSE SYSTEM WAS INOPERATIVE. | | | | | | |
| CORRECTIVE ACTION-CABLES INSTALLED AFTER TEST. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A681-0238/P3-501-00-18 HARNESS | FLIGHT | 18E 610328 | 13 2.7 | YES NO | |
| FAILURE MODE-OUT OF SPECIFICATION-ELECTRICAL CONNECTORS IN THE VERNIER CONTROL CIRCUITRY WERE TRANSPOSED AT THE POINT OF ATTACHMENT TO A FILTER UNIT WHICH WAS INCORPORATED AFTER THE WIRING HARNESSES HAD BEEN INSTALLED. | | | | | | |
| SYSTEM EFFECT-IMPROPER DISCRETE SIGNALS-TRANSPOSITION OF THE CONNECTORS CAUSED THE VERNIER SOLO TANK PRESSURIZATION SOLENOID TO RECEIVE THE VERNIER IGNITION SIGNAL AT 2.7 SECONDS AFTER LIFTOFF AND THE VERNIER CONTROL SOLENOID TO RECEIVE THE PRESSURIZATION SIGNAL AT BOOSTER CUTOFF. | | | | | | |
| VEHICLE EFFECT-IMPROPER TRAJECTORY-EARLY PRESSURIZATION PERMITTED HELIUM CONTROL BOTTLE PRESSURE TO VENT OVERBOARD THROUGH THE BLEED PORTS WHICH RESULTED IN FAILURE OF THE BOOSTER SECTION TO SEPARATE, WITH THE END RESULT THAT THE ANTICIPATED TRAJECTORY WAS NOT ACHIEVED. | | | | | | |

GENERAL DYNAMICS
CONVAIR DIVISION

18 JUN 1966

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|--|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| CORRECTIVE ACTION-UNKNOWN. THREE SOLUTIONS WERE POSSIBLE-IMPROVE INSPECTION, CHANGE ONE RECEPTACLE AND PLUG SO THE TWO CONNECTORS COULD NOT BE TRANSPOSED, SHORTEN THE LONGEST CABLE FOR THE SAME REASON. | | | | | | | 090125 |
| ELECTRICAL-A/B POWER DISTRIBUTION | 9K-14-072 UMBILICAL ADAPTER | FAR 27-00172-020 | 19E 610326 | 0 | NO | FAIRCHILD YES GRAY-MULEGUARD | 094349 |
| FAILURE MODE-FAILURE TO OPERATE AT PRESCRIBED TIME. ADAPTER FAILED TO EJECT WHEN GIVEN THE EJECT COMMAND. | | | | | | | |
| CORRECTIVE ACTION-NONE. THIS FAILURE WAS UNCONFIRMED. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | AE61-0273/FC-3CO-01-025 POWER CHANGEOVER SWITCH | COMPOSITE-FACTORY | 25E 610322 | | YES NO | | 090349 |
| FAILURE MODE-FAIL DURING OPERATION. THE POWER CHANGEOVER SWITCH WAS REPLACED BECAUSE OF A POSSIBLE BREAK BEFORE MAKE CONDITION OF THE DC CIRCUITS AT CHANGEOVER TO EXTERNAL POWER. | | | | | | | |
| SYSTEM EFFECT-ERRATIC OPERATION-INTERRUPTION IN DC VOLTAGE WOULD CAUSE IMPROPER OPERATION OF ELECTRICAL CIRCUITS TO ALL THE SYSTEMS STABILIZE. | | | | | | | |
| VEHICLE EFFECT-COMPOSITE RESCHEDULED. COMPOSITE RE-RAN WITH NEW SWITCH. | | | | | | | |
| CORRECTIVE ACTION-THE SWITCH WAS REPLACED. THE REPLACED SWITCH OPERATED SATISFACTORY DURING RETEST. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | AE61-0273/FC-3CO-01-025 POWER CHANGEOVER SWITCH | COMPOSITE-FACTORY | 25E 610322 | | YES NO | | 097073 |
| FAILURE MODE-FAIL DURING OPERATION-A POSSIBLE BREAK BEFORE MAKE CONDITION OF THE DC CIRCUIT OCCURRED AT THE POWER CHANGEOVER SWITCH. | | | | | | | |
| SYSTEM EFFECT-ERRATIC OPERATION-SWITCH MUST MAKE BEFORE BREAK TO MAINTAIN CONTINUITY IN HSL ELECTRICAL. | | | | | | | |
| VEHICLE EFFECT-COMPOSITE RE-SCHEDULED. POST-COMPOSITE TESTING REQUIRED. | | | | | | | |
| CORRECTIVE ACTION-REPLACED POWER CHANGEOVER SWITCH. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | AE61-0397/FC-4CO-01-110 HARNES | COMPOSITE-FACTORY | 110D 610316 | | YES NO | | |
| FAILURE MODE-OPEN (EJECT) GUIDANCE YAW STEERING SIGNALS WERE NOT EVIDENCED AT THE AUTOPILOT SYSTEM. TROUBLE TRACED TO DEFECTIVE SPLICE IN HARNES BETWEEN GUIDANCE SYSTEM AND AUTOPILOT. | | | | | | | |
| SYSTEM EFFECT-NONE. THE AUTOPILOT CANISTER DID NOT RECEIVE THE GUIDANCE YAW STEERING COMMAND. | | | | | | | |

GENERAL JANICS
CONVAIR DIVISION

15 JUN 1982

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | DATE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|---|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| CORRECTIVE ACTION-HARNESS SPLICE REPAIRED AND A GUIDANCE-AUTOTEST SYSTEM TEST PERFORMED TO DEMONSTRATE SYSTEM INTEGRITY. | | | | | | | 090330 |
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-20-063 LOW SENSING PROBE | FAR 27-04240-7 | 12E 010317 | ETR | YES NO | | 093001 |
| FAILURE MODE-OPEN ELECTRICAL. FAILURE WAS CONFIRMED AS OPEN ELECTRICAL CIRCUIT CAUSED BY MECHANICAL SHOCK AND VIBRATION. TWO IDENTICAL FAILURES ON-601 AND-1 UNITS, 3-3-81 AND 2-8-81. | | | | | | | |
| CORRECTIVE ACTION-PROBE HAS BEEN REDESIGNED TO A MUGGEDIZED CONFIGURATION. | | | | | | | 094332 |
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-14-082 HARNESS | FAR 27-61023-009 | 12E 010312 | ETR | YES NO | | |
| FAILURE MODE-ELECTRICAL OPEN. NO GUIDANCE ROLL SIGNAL WAS RECEIVED FOLLOWING INITIATION OF ROLL PROGRAM. HARNESS WAS PULLED LOOSE FROM CONNECTOR. | | | | | | | |
| CORRECTIVE ACTION-60/C QUALITY CONTROL REQUESTED TO INTENSIFY INSPECTION OF HARNESS ASSEMBLY. | | | | | | | 090711 |
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-20-051 CONX-CONNECTOR | FAR 27-43009-3 | 12E 010306 | ETR | YES NO | | |
| FAILURE MODE-OUT OF TOLERANCE DURING CHECKOUT OF 12E. FAILURE ANALYSIS REVEALED THE FAILURE WAS DUE TO THE ELECTRICAL CONDUCTIVE PATH FORMED BY THE CORROSION BETWEEN THE CENTER PIN AND THE SHELL OF J101 COAX CONNECTOR, UNIT 3/M 641 | | | | | | | |
| CORRECTIVE ACTION-NONE COULD BE TAKEN, BECAUSE THE SOURCE OF THE CORROSIVE AGENT COULD NOT BE DETERMINED. | | | | | | | 093038 |
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-20-053 LOW SENSING PROBE | FAR 7-43021-013 | 97D 010223 | WTR | YES NO | | |
| FAILURE MODE-ELECTRICAL OPEN. BOTH ELEMENTS A AND B FAILED DURING TANKING. FAILURE WAS CONFIRMED AS CAUSED BY BROKEN HEADER PINS. | | | | | | | |
| CORRECTIVE ACTION-PROBE IS BEING REDESIGNED TO A MUGGEDIZED CONFIGURATION. | | | | | | | |

13 JUN 1966

GENERAL NAMICS
CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|---|--------------------------------|---------------------|------------------|----------------|-------------------------------|--------|
| ELECTRICAL-A/B POWER DISTRIBUTION | 96-20-054 LOG SENSING PROBE | FAR 7-43081-811 | 810220 | OFFUTT | YES NO | | 893306 |
| FAILURE MODE-OPEN (ELECT). FAILURE WAS CONFIRMED AS CAUSED BY MECHANICAL SHOCK OR VIBRATION. | | | | | | | |
| CORRECTIVE ACTION-PROBE HAS BEEN REDESIGNED TO RUGGEDIZED CONFIGURATION. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | AE61-00821/PC-3CO-03-031 SWITCH-POWERCHANGE-OVER | COMPOSITE-FACTORY | 311 810216 | | YES NO | | 893307 |
| FAILURE MODE-FAIL DURING OPERATION-POWER CHANGE-OVER SWITCH FAILED DURING COMPOSITE. | | | | | | | |
| SYSTEM EFFECT-OPERATION DOES NOT START-FAULTY CHANGE-OVER SWITCH WOULD PREVENT PROPER OPERATION AFTER CHANGEOVER. | | | | | | | |
| VEHICLE EFFECT-COMPOSITE DELAYED. POST COMPOSITE TEST REQUIRED TO DEMONSTRATE SATISFACTORY OPERATION. | | | | | | | |
| CORRECTIVE ACTION-SWITCH IN/D AND REPLACED. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 96-14-057 HARNESS | FAR 27-61702-805 | 810204 | ETN | YES 50/C NO | | 894330 |
| FAILURE MODE-STRUCTURAL FAILURE CAUSED BY OVER-TORQUING OF A HARNESS CONNECTOR MOUNTING CLAMP. | | | | | | | |
| CORRECTIVE ACTION-MODIFICATION OF THIS HARNESS TO PROVIDE CANNON PLUGS WITH SAFETY WIRE HOLES WHICH SHOULD ALLEVIATE THE CONDITION. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 96-20-047 FUEL PROBE ASSEMBLY | FAR 27-72289-1 | 980 810202 | OFFUTT | YES 50/C NO | | 893366 |
| FAILURE MODE-OPEN ELECTRICAL. FAILURE WAS CONFIRMED AS CAUSED BY BROKEN WIRING AT THE POTTED CONNECTION. | | | | | | | |
| CORRECTIVE ACTION-CORRECTIVE ACTION TAKEN THROUGH RESPONSIBLE PERSONNEL. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | AE61-0054/PC-3CO-03-018 SWITCH, CHANGEOVER | COMPOSITE-FACTORY | 182 810201 | | YES NO | | |
| FAILURE MODE-OPEN (ELECT). TELEMETRY RF 1 CHANNEL RF 1 DID NOT SHOW THE PRESENCE OF 400 CYCLE PHASE A AFTER POWER CHANGEOVER TO INTERNAL, DUE TO AN OPEN IN THE MAIN MISSILE POWER CHANGEOVER SWITCH. | | | | | | | |

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CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | SITE TIME DIP | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|---|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| SYSTEM EFFECT-NONE. | | | | | | | 999857 |
| VEHICLE EFFECT-COMPOSITE OR RESCHEDULED. SYSTEM AND COMPOSITE RETESTING WAS REQUIRED. | | | | | | | |
| CORRECTIVE ACTION-THE POWER CHANGEOVER SWITCH WAS REPLACED. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | AC-81-0082/32-301-A1-08 HARNES | CAPTIVE | GE 610125 | 32 0.00 | YES NO | | 999048 |
| FAILURE MODE-OPEN. THE WIRE CONNECTING TO PIN K OF PLUG P18 WAS FOUND SEPARATED UPON POST TEST INVESTIGATION. THIS WIRING IS IN THE B2 PRIMARY SHUTDOWN CIRCUIT. | | | | | | | |
| SYSTEM EFFECT-LOSS OF REDUNDANCY. | | | | | | | |
| VEHICLE EFFECT-LATE BOOSTER ENGINE CUTOFF. | | | | | | | |
| CORRECTIVE ACTION-REPAIR BROKEN WIRE. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | GR-14-033 CHANGEOVER SWITCH | PAR 27-06108-801 | 610121 | 1TR | YES NO | UNITED CONTROL CORP. | 994913 |
| FAILURE MODE-FAILURE TO OPERATE AT PRESCRIBED TIME. SWITCH TRANSFER FAILED WHEN VOLTAGE WAS APPLIED. | | | | | | | |
| CORRECTIVE ACTION-VENDOR WAS NOTIFIED OF THE DISCREPANCIES FOR HIS CORRECTIVE ACTION. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A681-0014/FC-4CO-01-103 HARNES | COMPOSITE-FACTORY | 1030 610119 | | YES NO | 60/C | 999489 |
| FAILURE MODE-FAIL DURING OPERATION. PITCH AND YAW STEERING SIGNALS TO THE AUTOPILOT WERE NOT AS EXPECTED. IT WAS DE TERMINED THE PITCH AND YAW SIGNAL CHANNEL WERE REVERSED. | | | | | | | |
| SYSTEM EFFECT-IMPROPER ANALOG SIGNALS-PITCH STEERING COMMANDS APPEAR IN YAW CHANNEL. | | | | | | | |
| VEHICLE EFFECT-COMPOSITE DELAYED, RETEST OF GUIDANCE SYSTEM MADE. | | | | | | | |
| CORRECTIVE ACTION-HARNES IR/D AND REPAIRED. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 9K-20-037 POTENTIOMETER | PAR 27-43008-801 | 14E 601229 | PAR/PB | YES NO | 60/C | |
| FAILURE MODE-STRUCTURAL. FAILURE TRACED TO POTENTIOMETER REER WHICH ROTATED CONTINUOUSLY. MECHANICAL STOP HAD BEEN FORCED BEARING MECHANICAL STOP LEAVING CONTACT IN AN OPEN CIRCUIT ON POTENTIOMETER REER. | | | | | | | |

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DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | SITE TIME DIP | PRI OIN | VENDOR NAME VENDOR PART NO | |
|--------------------------------------|--|--------------------------------|---------------------|------------------|-------------------------------|-------------------------------|--------|
| | CORRECTIVE ACTION-60/C QUALITY CONTROL WILL BE NOTIFIED TO START A STUDY TO INCORPORATE A CHECKING PROCEDURE FOR AB SURANCE OF POTENTIOMETER INTEGRITY. | | | | | | 996733 |
| ELECTRICAL-A/B POWER DISTRIBUTION | 04333 PROBE-FUEL | COUNTDOWN | 990 601216 | 13-3 | YES NO | | 997259 |
| | FAILURE MODE-ELECTRICAL SHORT, CROSS COUPLING IN MISSILE PROBE CIRCUITRY. SYSTEM EFFECT-IMPROPER DISCRETE SIGNALS FUEL LOAD CONTROL FAILURE. VEHICLE EFFECT-COUNTDOWN ABORTED AND RESCHEDULED. CORRECTIVE ACTION-UNKNOWN. | | | | | | 994351 |
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-14-034 CONDUIT, VERNIER ENGINE | FAR 27-81393-9 | 601214 | FACTORY | YES CAL. NO | AVITRON | |
| | FAILURE MODE-SHORT CIRCUITING MAY HAVE OCCURRED IN THE VERNIER ENGINE ELECTRICAL HARNESS, REMOVAL OF SUBJECT DAMAGE D CONDUIT REVEALED PRAYED WIRE BRAIDING WHICH COULD HAVE SHORT CIRCUITED THE INTERNAL WIRING. | | | | | | 993034 |
| | CORRECTIVE ACTION-60/C INITIATED IMPROVED VENDOR QUALITY CONTROL. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 6R-20-040 LOE SENSING PROBE | FAR 27-43021-811 | 370 601214 | ETR | YES 60/C NO | | |
| | FAILURE MODE-OPEN (ELECT.). FAILURE WAS CONFIRMED AS CAUSED BY MECHANICAL SHOCK OR VIBRATION. | | | | | | |
| | CONNECTIVE ACTION-PROBE HAS BEEN REDESIGNED TO RUGGEDIZED CONFIGURATION P/N 27-04840 WHICH WILL REPLACE ALL 27-4302 1 SERIES. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-14-036 CHANGEOVER SWITCH | FAR 27-06106-801 | 910 601201 | ETR | YES UNITED CONTROL NO CORP | | 994907 |
| | FAILURE MODE-FAILED TO OPERATE AT PRESCRIBED TIME, AC SWITCH CONTACTS FAILING TO OPEN BEFORE CLOSING IN THE POWER Y TRANSFER FROM EXTERNAL TO INTERNAL. | | | | | | |
| | CORRECTIVE ACTION-THE VENDOR WAS NOTIFIED THAT THE SWITCH WOULD NOT MEET THE REQUIREMENTS OF 60/C QUALITY CONTROL A ACCEPTANCE, FOR HIS CORRECTIVE ACTION. | | | | | | |

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DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|---|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-20-041 LOS SENSING PROBE | FAR 27-04240-801 | 4E 801122 | ETR | YES NO | | 093033 |
| FAILURE MODE-OPEN (ELECT). FAILURE WAS CONFIRMED AS CAUSED BY MECHANICAL SHOCK OR VIBRATION. | | | | | | | |
| CORRECTIVE ACTION-PROBE HAS BEEN REDESIGNED TO RUGGEDIZED CONFIGURATION. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-20-033 DEMODULATOR WIRING | FAR 27-43018-19 | 73D 801117 | MTR | YES NO | 60/C | 090807 |
| FAILURE MODE-ELECTRICAL OPEN. EDO VOLTAGES WERE ERRATIC. TWO BROKEN WIRES WERE FOUND AND REPAIRED. UNIT WAS STILL OUT OF TOLERANCE. MONITOR WAS FOUND CONTAMINATED. | | | | | | | |
| CORRECTIVE ACTION-NONE ON BROKEN WIRES. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | AERO-0879/PC-4CO-01-098 HARNESS | COMPOSITE-FACTORY | 98D 801103 | | YES NO | | 090817 |
| FAILURE MODE-OPEN (ELECT) BOOSTER NO. 2 PITCH FEEDBACK TRANSDUCER VOLTAGE WAS NOT RECORDED DURING THE COMPOSITE TEST DUE TO AN OPEN IN THE MISSILE SERVO FEEDBACK LOOP. | | | | | | | |
| SYSTEM EFFECT-NONE. | | | | | | | |
| VEHICLE EFFECT-COMPOSITE DELAYED. POST-COMPOSITE TEST REQUIRED. | | | | | | | |
| CORRECTIVE ACTION-HARNESS REPAIRED. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | DAS36 COAX-CABLE | COMPOSITE-PAD/DPL | 91D 801017 | MTR | NO NO | | 097313 |
| FAILURE MODE-SHORT-IN COAX CABLE. | | | | | | | |
| SYSTEM EFFECT-LOSS OF REDUNDANCY. SHORT RESULTED IN 90 PCT FUEL PROBE FAILURE-LOAD STOPPED BY BACKUP PROBE. | | | | | | | |
| VEHICLE EFFECT-COMPOSITE DELAYED. | | | | | | | |
| CORRECTIVE ACTION-COAX REPAIRED. | | | | | | | |

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DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO |
|--|--|--------------------------------|---------------------|------------------|------------|-------------------------------|
| ELECTRICAL-A/B POWER DISTRIBUTION | AE80-0835/B2-403-00-33 DISCONNECT - STAGING | FLIGHT | 33D 800929 | 8-2 125.5 | YES NO | 093120 |
| <p>FAILURE MODE-OPEN ELECTRICAL CIRCUIT. DATA INDICATE LOSS OF ELECTRICAL CONTINUITY THROUGH THE STAGING DISCONNECT PLUG 10012 WHICH CARRIES POWER FOR BOOSTER MAINSTAGE CONTINUITY BOOSTER PITCH AND YAW ACTUATORS AND FOR THE BOOSTER JETTISON SIGNAL. IT WAS CONCLUDED THAT THE PLUG WAS NOT PROPERLY MATED AND THAT FLIGHT VIBRATION LED TO DISCONNECTION 10 SEC BEFORE NOMINAL BCO.</p> <p>SYSTEM EFFECT-OPERATION STOPS PREMATURELY. DISTRIBUTION OF ELECTRICAL POWER FOR BOOSTER ENGINE OPERATION, BOOSTER PITCH AND YAW ACTUATORS AND BOOSTER JETTISON SIGNAL WAS CUTOFF BY DISCONNECTION OF PLUG P2012.</p> <p>VEHICLE EFFECT-PREMATURE BOOSTER ENGINE CUTOFF. PLUG DISCONNECTION RESULTED IN LOSS OF ELECTRICAL POWER REQUIRED FOR CONTINUATION OF BOOSTER ENGINE MAINSTAGE OPERATION. SUBSEQUENT EFFECTS FROM SAVE CAUSE WERE NON-JETTISON OF BOOSTER ENGINES, LATE SUSTAINER ENGINE SHUTDOWN BY LOX DEPLETION AND A SHORT (6.0 SEC) VERNIER SOLO PHASE.</p> <p>CORRECTIVE ACTION-NONE. STUDY INDICATED PROPER ADHERENCE TO PLUG MATING PROCEDURE ASSURES NORMAL OPERATION.</p> | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | AE80-0848/PC-5CO-03-008 | COMPOSITE-FACTORY SE | 800924 | | NO NO | 099471 |
| <p>FAILURE MODE-ERRATIC OPERATION- 100 CPS PHASE A TRANSMITTING NOISE TO FLIGHT CONTROL SYSTEM.</p> <p>SYSTEM EFFECT-NONE- NOISE DID NOT AFFECT SYSTEM OPERATION.</p> <p>VEHICLE EFFECT-COMPOSITE RESCHEDULED.</p> <p>CORRECTIVE ACTION-TWC 6SE GROUND 400CPS PHASE A AND MISSILE 400CPS PHASE A WERE SHIELDED TO CORRECT THIS CONDITION.</p> | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | AE80-0748/P2-4CO-03-80 HARNESS | COMPOSITE-J FACT | 80D 800919 | 12 | YES NO | 093971 |
| <p>FAILURE MODE-ELECTRICAL SHORT. AUTOPILOT HARNESS HAD INNER CONDUCTOR SHORTED TO SHIELDING. THERE WAS ALSO AN INTERNAL OPEN AT FIN B, PLUG 501.</p> <p>SYSTEM EFFECT-ERRATIC OPERATION. ELECTRICAL POWER TO AUTOPILOT WAS INTERMITTENT.</p> <p>VEHICLE EFFECT-COMPOSITE RESCHEDULED. TEST RESULTS CONSIDERED UNSATISFACTORY FOR AUTOPILOT.</p> <p>CORRECTIVE ACTION-IR 551798 AND IR 551814 WRITTEN. HARNESS REPAIRED. PLUG 501 RETAINED.</p> | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-14-033 CONNECTOR-BRAZEMAN | FAR | 80D 800916 | ETR | YES NO | 093971 |
| <p>FAILURE MODE-CONTAMINATION. ERRATIC OPERATION OF THE BOOSTER PROPELLANT VALVE CLOSED LIGHTS CAUSE BY BROKEN AND CORRODED PINS.</p> | | | | | | |

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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|--------------------------------------|--|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| | CORRECTIVE ACTION-GO/C INTENSIFIED SURVEILLANCE TO INSURE PROPER PLUG SEAL INSTALLATION. REVISED GO/C FTP-E-021 INS TALLATION PROCEDURE. | | | | | | 094333 |
| ELECTRICAL-A/B POWER DISTRIBUTION | AC-60-0033/82-509-A3-02 HARNESS | CAPTIVE | 2E 600809 | 32 | YES NO | | 090902 |
| | FAILURE MODE-OPEN (ELECTRICAL). PROGRAMMER GENERATED VECO, HOWEVER SIGNAL DID NOT REACH ENGINE RELAY BOX DUE TO A B POWEN WIRE IN THE ELECTRICAL HARNESS. SYSTEM EFFECT-IMPROPER DISCRETE SIGNALS. VECO SIGNAL GENERATED BY ENGINE TIMER. VEHICLE EFFECT-LATE VERNIER CUTOFF. CORRECTIVE ACTION-UNKNOWN. | | | | | | 090902 |
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-14-046 HARNESS | FAR 27-01814-009 | 54D 600808 | FACTORY | YES NO | GO/C | 090902 |
| | FAILURE MODE-OPEN CIRCUIT IN THE V-1 SERVO CONTROLLER HARNESS-LOSS OF V-1 GIMBALLING CONTROL. CORRECTIVE ACTION-GO/C PERSONNEL CAUTIONED AGAINST ROUGH HANDLING. MANUFACTURING PERSONNEL WILL USE ANTI SOLDER WICK ING TOOL. | | | | | | 090902 |
| ELECTRICAL-A/B POWER DISTRIBUTION | AE80-0812/PC-4CO-01-80 | COMPOSITE-FACTORY | ADD 600725 | | YES NO | | 090902 |
| | FAILURE MODE-ERRATIC OPERATION. TELEMETRY IS AND E EXHIBITED EXCESSIVE SPIKING AND NOISE- 10 PCT 18W- UNTIL POWER C HANGE-OVER FROM INTERNAL TO EXTERNAL POWER. SYSTEM EFFECT-ERRATIC OPERATION. VEHICLE EFFECT-COMPOSITE RESCHEDULED. SATISFACTORY POST-COMPOSITE TESTING WAS PERFORMED. CORRECTIVE ACTION-CABLING BETWEEN THE ARMING SWITCH AND THE POWER AND SIGNAL CONTROL UNIT IN THE R/WSE SAFETY COMMA ND SYSTEM WAS REMOVED AND SHIELDED TO CORRECT THIS CONDITION. | | | | | | 090902 |
| ELECTRICAL-A/B POWER DISTRIBUTION | AE60-0340/PI-408-00-86 | COUNTDOWN 27-20001 | 66D 600725 | 11 -420 | YES NO | | 090902 |
| | FAILURE MODE-PREATURE OPERATION. ENGINE START TANKS VENTED DUE TO A SPURIOUS SIGNAL. | | | | | | 090902 |

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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|--|---|--------------------------------|---------------------|------------------|------------|-------------------------------|---------|
| SYSTEM EFFECT-IMPROPER-DISCRETE SIGNALS. ENGINE START TANKS VENTED WHEN NOT EXPECTED. VEHICLE EFFECT-COUNTDOWN ABORTED AND RESCHEDULED. COUNTDOWN WAS ABORTED AT T-7. CORRECTIVE ACTION-REFERENCE TVA A25002, A25003, A25004, TP8 11-466, FTP-M-062B, IR 533559. | | | | | | | 898298 |
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-20-034 MANDREL-FUEL O-RING | FAR 27-43018-11 | 600624 | AMR | YES NO | 60/C | 898730 |
| FAILURE MODE-ELECTRICAL SHORT. ITEM REJECTED FOR INTERMITTENT HIGH RESISTANCE SHORT DURING LAB TESTS. THIS SHORT WAS THE RESULT OF MERCURY LEAKAGE PAST TOP SUPPORT O-RING TOMANDEL ELECTRICAL CONNECTOR. SIMILAR TO FAR-98-20-013 DATED 591204. | | | | | | | |
| CORRECTIVE ACTION-60/C TOOK ACTION THROUGH QUALITY CONTROL PROCEDURES TO INSURE POSITIVE SEALING BY THE O-RING TO PREVENT RECURRANCE. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | AE/0-0536/P4-402-00-62 HARNESS | FLIGHT | 82D 600622 | 14 299.7 | YES NO | | 8987299 |
| FAILURE MODE-OPEN (ELECT). VECO COMMAND SENT BY GUIDANCE DECODER BUT WAS NOT RECEIVED BY FLIGHT PROGRAMMER BECAUSE OF OPEN CIRCUIT IN ELECTRICAL HARNESS. PLUG P303 MOST SUSPECT POINT IN HARNESS. PLUG WAS POTTED AT AMR. | | | | | | | |
| SYSTEM EFFECT-IMPROPER DISCRETE SIGNALS. VECO COMMAND NOT RECEIVED BY PROGRAMMER FROM DECODER. NECESSITATED USE OF FLIGHT PROGRAMMER BACK-UP COMMAND TO ACCOMPLISH VECO. | | | | | | | |
| VEHICLE EFFECT-LATE VERNIER CUTOFF. FLIGHT PROGRAMMER BACK-UP SWITCH SENT COMMAND 8 SECONDS AFTER GUIDANCE DISCRETE COMMAND WAS GENERATED. IMPACT POINT WAS 16 MILES LONG. | | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. RECOMMENDED THAT A CALLOUT BE PLACED IN THE COUNTDOWN PROCEDURE TO DETERMINE THAT EA PEN NO. 132 SHOWS A DEFLECTION DURING THE LOOP TEST AND DURING THE DATA LINK TEST. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-20-031 HARNESS WIRE CONNECTOR-P/U | FAR 27-43002-803 | 600616 | ETR | YES NO | 60/C | 898432 |
| FAILURE MODE-OUT OF SPECIFICATION-POTTING COMPOUND ON CONNECTOR P201 WAS OBSERVED TO BE LOOSE, EXPOSING THE WIRES AND NO SOLDER POTS. POTTING SHOWED EVIDENCE OF MOVEMENT ON CONNECTORS P202, P203 AND P204. POTTING DID NOT ADHERE TO BACK OF CONNECTORS AS THE RESULT OF INSUFFICIENT APPLICATION OF PRIMER OR NOT THOROUGHLY CLEANED. | | | | | | | |
| CORRECTIVE ACTION-60/C HAS TAKEN ACTION THROUGH QUALITY CONTROL PROCEDURES TO CORRECT POTTING OF CONNECTORS. | | | | | | | |

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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO |
|--|---|--------------------------------|---------------------|------------------|------------|-------------------------------|
| ELECTRICAL-A/B POWER DISTRIBUTION | 04207/81-4MO-08-47 BATTERY SIMULATOR CABLE | COMPOSITE-FRD/DPL | 47D 600807 | 8-1 | YES NO | 994934 |
| FAILURE MODE-FAILED TO OPERATE AT PRESCRIBED TIME. POWER FAULT AT POWER TRANSFER TO INTERNAL ATTRIBUTED TO INCORRECT WIRING. | | | | | | |
| SYSTEM EFFECT-OPERATION DOES NOT START. FAILED TO TRANSFER TO INTERNAL. | | | | | | |
| VEHICLE EFFECT-COUNTDOWN DELAYED. COMMIT SEQUENCE ABORTED. | | | | | | |
| CORRECTIVE ACTION-REPAIR WIRING. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 9B-14-047 UMBILICAL RECEPTACLE | FAR 7-08320-5 | 55D 600801 | FACTORY | 60/C | 998903 |
| FAILURE MODE-STRUCTURAL FAILURE PREVENTED MATING OF THE SUSAINER AND VERNIER ENGINE CONTROLS UMBILICAL. | | | | | | |
| CORRECTIVE ACTION-60/C MANUFACTURING PERSONNEL WERE CAUTIONED OF THE INFRACTION OF MPS 18-02.2 | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | DA200/81-4MO-03-47 SWITCH, CHANGEOVER | COMPOSITE-FRD/DPL | 47D 600428 | 5768-1 | YES NO | 997396 |
| FAILURE MODE-FAILED TO OPERATE AT PRESCRIBED TIME. MISSILE FAILED TO TRANSFER TO INTERNAL POWER. | | | | | | |
| SYSTEM EFFECT-NONE-MISSILE REMAINED ON GROUND POWER. | | | | | | |
| VEHICLE EFFECT-COMMIT SEQUENCE AND COUNTDOWN ABORTED. | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | AE60-036/FC-5CO-01-03 HARNES | COMPOSITE-FACTORY | 3E 600427 | | YES NO | 998504 |
| FAILURE MODE-OPEN (ELECTRICAL). SIGNAL WIRE AT ARMA GUIDANCE DISCONNECT WAS OPEN. AS A RESULT THE ARMA GUIDANCE TORQUING WAS NOT RECEIVED AFTER STAGING. | | | | | | |
| SYSTEM EFFECT-NONE. | | | | | | |
| VEHICLE EFFECT-COMPOSITE DELAYED AND RESCHEDULED. RERUN OF COMPOSITE MADE SATISFACTORILY. | | | | | | |
| CORRECTIVE ACTION-SIGNAL WIRE REPAIRED. | | | | | | |

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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|---|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-14-044 HARNES | FAR 27-11811-807 | 58D 600404 | ETR | YES NO | 60/C | 898605 |
| FAILURE MODE-STRUCTURAL. FAILURE OF THE HARNES WAS CAUSED BY HARNES CHAPPING ON A CRACKED VERNIER TRANSDUCER CONDUIT. | | | | | | | |
| CORRECTIVE ACTION-REINSPECTION OF ALL MISSILES FOR ABRASIVE CONDITIONS AND REPLACEMENTS AS REQUIRED. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A80-0339/FC-4CO-01-62 HARNES | COMPOSITE-FACTORY | 62D 600330 | | YES NO | | 898958 |
| FAILURE MODE-ELECTRICAL OPEN. NO ROLL FUNCTIONS RECORDED. NO POSITIVE ROLL GYRO SIGNAL RECORDED. INVESTIGATION REVEALED THE POSITIVE ROLL GYRO SIGNAL WIRE BETWEEN P901 PIN-8, AND P201, PIN (P), WAS OPEN. | | | | | | | |
| SYSTEM EFFECT-IMPROPER ANALOG SIGNALS. | | | | | | | |
| VEHICLE EFFECT-COMPOSITE RESCHEDULED. THE A/P ROLL PROGRAM WAS NOT ACCOMPLISHED. | | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. COMPOSITE RE-RUN SATISFACTORILY AFTER CORRECTING PROBLEM. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-14-039 VERNIER TRANSDUCER CONDUIT | FAR 27-61393-3 | 51D 600315 | FACTORY | YES NO | 60/C | 898781 |
| FAILURE MODE-STRUCTURAL. CONDUIT WAS BROKEN FROM CONDUIT RING AND CRACKED IN A CONVOLUTED SECTION CAUSING WEAR TO ELECTRICAL HARNES. | | | | | | | |
| CORRECTIVE ACTION-REDESIGN OF COMPONENT. REPLACING CONVOLUTED SECTION WITH FLEXIBLE WIRE BRAID AND A TEFLON BEARING SURFACE AT ROTATING JOINT. RETROFIT TO MISSILE 33D | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-14-039 VERNIER TRANSDUCER CONDUIT | FAR 27-61393-3 | 42D 600315 | FACTORY | YES NO | 60/C | 898780 |
| FAILURE MODE-STRUCTURAL. CONDUIT WAS BROKEN FROM CONDUIT RING AND CRACKED IN A CONVOLUTED SECTION. | | | | | | | |
| CORRECTIVE ACTION-REDESIGN OF COMPONENT, REPLACING CONVOLUTED SECTION WITH FLEXIBLE WIRE BRAID AND A TEFLON BEARING SURFACE AT ROTATING JOINT. RETROFIT TO MISSILE 33D. | | | | | | | |

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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO |
|--|---|--------------------------------|---------------------|------------------|------------|-------------------------------|
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-14-040 HARNESS | FAR 27-62711 | 600303 | SYCAMORE | YES NO | 600303 |
| FAILURE MODE-ELECTRICAL SHORT CIRCUIT BETWEEN TWO WIRES AT THE CONNECTOR. WERE CONNECTED TO DECODER. | | | | | | |
| CORRECTIVE ACTION-60/C CLOSER SURVEILLANCE OF MANUFACTURING THROUGH QUALITY CONTROL PROCEDURES. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-14-040 HARNESS | FAR 27-61702 | 600303 | ETR | YES NO | 600303 |
| FAILURE MODE-ELECTRICAL SHORT CIRCUIT BETWEEN TWO WIRES AT THE CONNECTOR WHERE PLUG IS CONNECTED TO DECODER. | | | | | | |
| CORRECTIVE ACTION-60/C CLOSER SURVEILLANCE OF MANUFACTURING THROUGH QUALITY CONTROL PROCEDURES. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-14-042 HARNESS | FAR 27-61755-889 | 51D 600302 | FACTORY | YES NO | 600307 |
| FAILURE MODE-ELECTRICAL OPEN. INTERMITTENT CONNECTION FROM LOOSE WIRE AT PLUG 5A2P7 TO GUIDANCE. | | | | | | |
| CORRECTIVE ACTION-IMPROVEMENT OF SOLDERING TECHNIQUES BY CONDUCTING INSTRUCTION CLASSES TO TRAIN PERSONNEL ON CORRECT SOLDERING METHODS. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-14-041 HARNESS | FAR 27-62711-895 | 44D 600301 | ETR | YES NO | 600306 |
| FAILURE MODE-ELECTRICAL OPEN. INTERMITTENT CONNECTION FROM LOOSE WIRE AT PLUG CAUSING INTERMITTENT SIGNAL TO AUTOPILOT SERVO INTEGRATOR. | | | | | | |
| CORRECTIVE ACTION-FLIGHTER INSPECTION OF ELECTRICAL HARNESS MANUFACTURING. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-14-035 CHANGEOVER SWITCH | FAR 27-06186-1 | 42D 600216 | FACTORY | YES NO | |
| FAILURE MODE-FAILED TO OPERATE AT PRESCRIBED TIME. THE AC SWITCH CONTACTS FAILED TO BREAK BEFORE MAKE DURING TRANSFER. | | | | | | |

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CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE -PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|--|---------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| CORRECTIVE ACTION-60/C HAS INITIATED MORE STRINGENT QUALITY CONTROL PROCEDURES THROUGH THE USE OF TEST EQUIPMENT. | | | | | | | 994906 |
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-18-013 BATTERY THERMOSWITCH | FAR 27-06360-1 | 600200 | ETR | YES NO | ELECTRIC STORA GE BATTERY | 998790 |
| FAILURE MODE-OPEN (ELECT.)-SWITCH CLOSED AT AN AMBIENT TEMPERATURE OF 60 DEGREES FAHRENHEIT OR LOWER. THE BATTERY W AS SUBJECTED TO AN AMBIENT TEMPERATURE OF ZERO DEGREES FAHRENHEIT FOR SIXTEEN HOURS. THERMOSTAT STILL INDICATED AN O PEN CIRCUIT CONDITION. | | | | | | | |
| CORRECTIVE ACTION-VENDOR WILL ENERGIZE THE HEATER CIRCUIT TO ACTUATE THE THERMOSTAT AT ZERO DEGREES FAHRENHEIT. ALL BATTERIES WILL BE TEMPERATURE CYCLED THREE TIMES BY BATTERY HEATER OPERATION AT ZERO DEGREES FAHRENHEIT. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-14-034 ELECTRICAL CONNECTOR | FAR 3106E-36-11P | 600129 | FACTORY | YES NO | BENDIX | 994354 |
| FAILURE MODE-CONTAMINATION. ELECTRICAL SHORT CIRCUIT BETWEEN CONTACT PINS FROM MOISTURE. | | | | | | | |
| CORRECTIVE ACTION-APPROPRIATE ACTION WAS TAKEN BY 60/C TO ASSURE THAT ASSEMBLY WOULD BE IN ACCORDANCE WITH WPS NO. 25-08A. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | AE60-0039/AZ-403-00-08 ELECTRICAL CIRCUITRY | FLIGHT | 60 600126 | 576A-3 278.4 | YES YES | | 992411 |
| FAILURE MODE-FAIL TO OPERATE AT PRESCRIBED TIME. THE GUIDANCE VECO DISCRETE WAS GENERATED AND TRANSMITTED AT 278.4 SECONDS BUT FAILED TO INITIATE VECO POSSIBLE DUE TO FAULTY ELECTRICAL CIRCUITS DOWNSTREAM OF THE SHIFT REGISTER. | | | | | | | |
| SYSTEM EFFECT-IMPROPER DISCRETE SIGNALS. VERNIER ENGINES CONTINUED FIRING UNTIL BACK-UP SIGNAL FROM FLIGHT PROGRAMM ER WAS ACCOMPLISHED AT 294.4 SECONDS. | | | | | | | |
| VEHICLE EFFECT-LATE VERNIER ENGINE CUTOFF. | | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | PTA8342/PS-401-00-44 DISCONNECT - STAGING | COUNTDOWN | 440 600122 | 13 -4200 | YES NO | | |
| FAILURE MODE-OPEN (ELECT) A LOOSE LEAD AT PIN 31 OF J2012 (SUSTAINER HALF). THIS LINE IS THE CENTER TAP LEAD FROM T HE B1 YAW ACTUATOR FEEDBACK TRANSDUCER TO THE SERVO CAMISTER. | | | | | | | |
| SYSTEM EFFECT-ERRATIC OPERATION. B1 YAW ENGINE OPERATION WAS ERRATIC. | | | | | | | |

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DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|--|--------------------------------|---------------------|------------------|----------------|-------------------------------|--------|
| VEHICLE EFFECT-COUNTDOWN ABORTED AND RESCHEDULED. | | | | | | | 998610 |
| CORRECTIVE ACTION-CONNECTION REPAIRED. REF. PRELIMINARY FAILURE ANALYSIS REPORT NO. A-371. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | FTAS65/P1-4CO-03-42 SWITCH, CHANGEOVER, MISSILE POWER | COMPOSITE-B FACT | 42D 600122 | 11/ETR -300 | YES NO | | 994679 |
| FAILURE MODE-OUT OF SPECIFICATION. BREAK TIMES OF AC ELECTRICAL CONTACTS WERE OUT OF SPECIFICATIONS. | | | | | | | |
| SYSTEM EFFECT-ERRATIC OPERATION. DURING POWER CHANGEOVER FROM MISSILE INTERNAL POWER TO COMPLEX EXTERNAL POWER MISSILE AC VOLTAGES WERE INCORRECT. ALL PULSE BEACON DC POWER SUPPLIES FED BY PHASE B WERE BURNED OUT. | | | | | | | |
| VEHICLE EFFECT-COUNTDOWN DELAYED. 42 MINUTE HOLD OF WHICH SOME MAY HAVE BEEN FOR PROGRAMMER PROBLEM. | | | | | | | |
| CORRECTIVE ACTION-SWITCH REPLACED AFTER TEST. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | AZC-27-117 P3-401-00-43 INVERTER | FLIGHT | 43D 600106 | 13 135 | NO NO | | 997636 |
| FAILURE MODE-SHORT (ELECT). A SEVERE TRANSIENT OCCURRED IN THE ELECTRICAL SYSTEM AS A RESULT OF A SHORT IN THE GE 1 IMPACT PREDICTOR HARNESS. | | | | | | | |
| SYSTEM EFFECT-ERRATIC OPERATION. INVERTER FREQUENCY DROPPED BELOW 370 CPS, AC VOLTAGE DROPPED TO 104.6 VOLTS AND DC VOLTAGE TO 22.3 VOLTS. TRANSIENT LASTED FROM 135.57 SECONDS TO 137.0 SECONDS. THE SHORT APPARENTLY TERMINATED BEFORE THE ELECTRICAL OR ANY USER SYSTEM WAS DAMAGED. | | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-20-013 HANDREL-O-RING | FAR 27-43016 | 591200 | ETR | YES GD/C NO | | 995423 |
| FAILURE MODE-SHORT (ELECT)-FAILURE WAS EVIDENCED BY A SHORT CIRCUIT TO GROUND IN THE LOX ANNOMETER WHEN THE ANNOMETER WAS PRESSURIZED TO 80 PSI. | | | | | | | |
| CORRECTIVE ACTION-GD/C IS TAKING CORRECTIVE ACTION THROUGH QUALITY CONTROL PROCEDURES TO REDUCE FAILURE OF THIS TYPE. | | | | | | | |

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| SYS- SUB-SYS | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO |
|--|---|--------------------------------|---------------------|------------------|------------|-------------------------------|
| ELECTRICAL-A/B POWER DISTRIBUTION | 9D-20-024 LOZ SENSING PROBE | FAR 7-43021-813 | 25D 591129 | WTR | YES NO | 693059 |
| FAILURE MODE-OPEN (ELECT.). FAILURE WAS CONFIRMED AS CAUSED BY MECHANICAL SHOCK OR VIBRATION. | | | | | | |
| CORRECTIVE ACTION-ACTION TAKEN THROUGH MANUFACTURING PROCEDURES TO INSURE THE WELDED ATTACH POINTS OF THE ELEMENTS. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | AZM-27-427/FC-4CO-01-48 POWER CHANGE-OVER SWITCH | COMPOSITE-FACTORY | 48D 591119 | | YES NO | 694858 |
| FAILURE MODE-FAIL TO OPERATE AT PRESCRIBED TIME. TWO POWER CHANGE-OVER ATTEMPTS WERE MADE. DURING THE FIRST ATTEMPT THE INTERNAL 115 VAC TRACE WENT OFF SCALE. A RELAY IN THE POWER CHANGE-OVER SWITCH STUCK WHICH CAUSED A LOSS OF POWER. | | | | | | |
| SYSTEM EFFECT-OPERATION DOES NOT START. | | | | | | |
| VEHICLE EFFECT-COMPOSITE DELAYED. | | | | | | |
| CORRECTIVE ACTION-UNKNOWN. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | S-1804/51-403-42-36 LOX OVERFILL PROBE SENSOR | CAPTIVE | 56D 591105 | 37C | YES NO | 698902 |
| FAILURE MODE-OPEN ELECT. ONE SECTION OF THE OVER FILL PROBE BECAME OPEN PRIOR TO THE 1 POST TEST INSPECTION REVEALED BOTH SECTIONS OF THE PROBE WERE OPEN. | | | | | | |
| SYSTEM EFFECT-INTROPER DISCRETE SIGNAL. | | | | | | |
| VEHICLE EFFECT-NONE. PRIMARY SYSTEM PERFORMED THE REQUIRED FUNCTION. | | | | | | |
| CORRECTIVE ACTION-PROBE REPLACED. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 9D-14-024 CHANGE-OVER SWITCH | FAR 27-08108-601 | 12D 591080 | ETR | YES NO | 694897 |
| FAILURE MODE-FAIL TO OPERATE AT PRESCRIBED TIME. FAILED TO TRANSFER FROM INTERNAL TO EXTERNAL. | | | | | | |
| CORRECTIVE ACTION-GO/C HAS INITIATED A CHANGE TO CHECK-OUT PROCEDURE TO ELIMINATE THE INCORRECT TRANSFER SIGNAL. | | | | | | |

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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO |
|--|---|--------------------------------|---------------------|------------------|-----------------|-------------------------------|
| ELECTRICAL-A/B POWER DISTRIBUTION | AZC-27-082/P1-48N-01-26 HARNES | COMPOSITE-J FACT | 260 591019 | 11 | YES NO | 091434 |
| FAILURE MODE-ELECTRICAL SHORT. AN EXTRANEUS AUTOPILOT GROUND WIRE WAS WIRED INTO THE VERNIER START TANKS PRESSURIZ ATION SYSTEM. WHEN VOLTAGE WAS APPLIED, THE CURRENT DRAIN TO GROUND WAS SUFFICIENT TO PREVENT ACTIVATION OF THE RELAY FOR SEQUENCE OF START TANKS PRESSURIZATION. | | | | | | |
| SYSTEM EFFECT-OPERATION DOES NOT START. SEQUENCE OF START TANKS PRESSURIZATION WAS PRECLUDED. | | | | | | |
| VEHICLE EFFECT-COMMANDS NOT RECEIVED. ENGINES DO NOT START. | | | | | | |
| CORRECTIVE ACTION-REMOVED WIRE. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | AZC-27-082/P1-48N-01-26 CONNECTOR/PLUG | COMPOSITE-J FACT | 260 591019 | 11 | NO CANNON NO | 091164 |
| FAILURE MODE-FAILED DURING OPERATION. CANNON PLUG P207-1 BURNED OUT DUE TO A CONSTANT SHORTING CAUSED BY INCORRECTLY WIRED BOIL-OFF VALVE. | | | | | | |
| SYSTEM EFFECT-IMPROPER DISCRETE SIGNALS. CONTROL OF BOIL-OFF VALVE COULD NOT BE MAINTAINED. | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | |
| CORRECTIVE ACTION-REPLACED PLUG. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | AZM-27-368/FC-4CO-01-39 HARNES | COMPOSITE-FACTORY | 39D 591008 | 166.8 | YES 60/C NO | 097860 |
| FAILURE MODE-FAIL TO OPERATE AT PRESCRIBED TIME-PRESSURIZE VERNIER TANKS COMMAND OCCURRED AT 166.8 SECONDS RATHER THAN 165 SECONDS. CAUSED BY A FAULTY HARNES. | | | | | | |
| SYSTEM EFFECT-IMPROPER DISCRETE SIGNALS. | | | | | | |
| VEHICLE EFFECT-COMPOSITE RESCHEDULE. | | | | | | |
| CORRECTIVE ACTION-HARNES 27-61711 REMOVED TO BLUEPRINT CORRECTING DISCREPANCY. COMPLETE COMPOSITE RETEST WAS PERFORMED. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | AZM-27-365/FC-4CO-02-35 HARNES | COMPOSITE-FACTORY | 35D 591008 | | YES NO | |
| FAILURE MODE-ERRATIC OPERATION-VARIATIONS IN RATE BEACON POWER DATA WERE OBSERVED DUE TO IMPROPER CONFIGURATION OF MISSILE HARNESING. | | | | | | |
| SYSTEM EFFECT-IMPROPER ANALOG SIGNALS. | | | | | | |

GENERAL DYNAMICS
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DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO |
|---|--|--------------------------------|---------------------|------------------|------------|-------------------------------|
| VEHICLE EFFECT-COMPOSITE RESCHEDULED. COMPOSITE RE-RAN. | | | | | | |
| CORRECTIVE ACTION-MISSILE HARNESS WIRING CHANGED TO LATEST CONFIGURATION. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | S2-408-C6-24 WIRING | CAPTIVE | 24D 591006 | 3-2 261.14 | YES YES | |
| FAILURE MODE-OPEN (ELECT). OPEN CIRCUIT TO THE VERNIER SOLO ACTUATION VALVE SQUIB IN THE CONNECTOR AT THE LEAD AT 7 WE BASE OF PIN C. | | | | | | |
| SYSTEM EFFECT-IMPROPER DISCRETE SIGNAL. THE SQUIB IN THE VERNIER SOLO ACTUATION VALVE DID NOT FIRE DUE TO THE INABILITY OF A PROPER DISCRETE SIGNAL BEING SENT TO IT. | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | |
| CORRECTIVE ACTION-RECOMMENDATIONS FOR CORRECTIVE ACTION ARE PRESENTED IN FAILURE ANALYSIS REPORT (FARNO. 58-10-039) | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | S2-408-C6-24 PLUG, MECHANICAL | CAPTIVE | 24D 591006 | 5-2 261.14 | YES NO | |
| FAILURE MODE-CONTAMINATION. PLUG 702, WHICH IS THE CONNECTING PLUG BETWEEN THE SERVO AMPLIFIER AND SERVO WAS CORRODED AND DETERIATED. | | | | | | |
| SYSTEM EFFECT-OPERATION TOO LOW. CONTAMINATION OF PLUG 702 RESULTED IN A LOW ENGINE MOVEMENT RATE DURING A STEP TYPE OF INPUT. | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | |
| CORRECTIVE ACTION-THE PLUG WAS REMOVED AND REPLACED. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | ACZ-27-078/P3-404-00-17 CIRCUIT BOARD, PROGRAMMER | FLIGHT | 17D 590916 | 13 276.6 | YES YES | |
| FAILURE MODE-FAIL TO OPERATE AT PRESCRIBED TIME. THE V8HPS DID NOT ACTIVATE AT SUSTAINER CUTOFF DUE TO A POSSIBLE FAILURE OF THE ELECTRICAL SIGNAL, INITIATED BY THE PROGRAMMER TO REACH THE EXPLOSIVE VALVE. | | | | | | |
| SYSTEM EFFECT-NONE. | | | | | | |
| VEHICLE EFFECT-LOSS OF VEHICLE STABILITY. THE LACK OF HYDRAULIC PRESSURE PRECLUDED VERNIER CONTROL DURING THE VERNIER SOLO PHASE OF FLIGHT. | | | | | | |
| CORRECTIVE ACTION-INSTRUMENTATION WAS ADDED ON 180 TO MONITOR THE SIGNAL TO THE EXPLOSIVE VALVE. | | | | | | |

GENERAL MANICS
CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYS- SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF TIME | PRI OTH | VENDOR NAME VENDOR PART NO |
|---|---|--------------------------------|--------------------------|------------|-------------------------------|
| ELECTRICAL-A/B POWER DISTRIBUTION | AZM-27-356/PFC-4CO-DI-3A HARNESS | COMPOSITE-FACTORY 7-41015 | 3AD 590912 | YES NO | 60/C |
| FAILURE MODE-ELECTRICAL OPEN. BROKEN WIRE TO P001S CAUSED ERRATIC ACTUATOR MOVEMENTS AND RESULTED IN AMPLITUDE VARIATIONS OF BOOSTER NO 2 YAW/ROLL AND VERNIER NO 2 PITCH/ROLL. | | | | | |
| SYSTEM EFFECT--IMPROPER ANALOG SIGNALS | | | | | |
| VEHICLE EFFECT--COMPOSITE RESCHEDULED. | | | | | |
| CORRECTIVE ACTION-AIRBORNE HARNESS REPAIRED. A COMPLETE COMPOSITE RETEST WAS PERFORMED. | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | AZC-27-077/P4-403-QQ-10 HARNESS | FLIGHT | 10D 590939 | YES YES | |
| FAILURE MODE-FAIL TO OPERATE AT PRESCRIBED TIME. POSSIBLE FAILURE OF THE ELECTRICAL CIRCUITRY IN PROVIDING ELECTRIC AL CURRENT TO THE CONAX VALVE OF THE BOOSTER SECTION SEPARATION SYSTEM. | | | | | |
| SYSTEM EFFECT-NONE. | | | | | |
| VEHICLE EFFECT-IMPROPER TRAJECTORY. THE BOOSTER SECTION DID NOT SEPARATE FROM THE VEHICLE. AS A RESULT OF THE ADDED WEIGHT OF THE BOOSTER SECTION, IMPACT OCCURRED APPROXIMATELY 500 NAUTICAL MILES SHORT OF THE PLANNED RANGE. | | | | | |
| CORRECTIVE ACTION-NONE. | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 9D-14-U23 UMBILICAL CABLE ASSEMBLY | FAR 27-06121-3A | 12D 590908 | YES NO | TICN P1007 |
| FAILURE MODE-ELECTRICAL OPEN CIRCUIT FROM MALPOSITIONED CONTACT PINS WHICH PREVENTED ELECTRICAL CONTACT WITH MATING UNIT. | | | | | |
| CORRECTIVE ACTION-GO/C HAS PROPOSED A DESIGN MODIFICATION TO CORRECT THE DEFICIENCY. | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | FTA-6084/P2-302-QG-11 UMBILICAL | COUNTDOWN | 11C 590921 | NO NO | |
| FAILURE MODE-OPEN (ELECTRICAL) LOOSE UMBILICAL PREVENTED SIGNALS FROM REACHING GROUND BOX CAUSING AN IGNITION CUTOFF. | | | | | |
| SYSTEM EFFECT-IMPROPER DISCRETE SIGNALS. | | | | | |
| VEHICLE EFFECT-COUNTDOWN ABORTED AND RESCHEDULED. | | | | | |
| CORRECTIVE ACTION-CORRECTED LOOSE UMBILICAL DISCREPANCY. | | | | | |

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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | SITE TIME DIP | PRI OTH | VENDOR NAME VENDOR PART NO |
|--|---|------------------------------------|---------------------|------------------|------------|-------------------------------|
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-14-082 STAGING CONNECTOR | FAR 7-08248-9 | 590804 | FACTORY | YES NO | AMPHENOL NO 093661 |
| FAILURE MODE-FAIL TO OPERATE AT PRESCRIBED TIME. STAGING DISCONNECT FAILED TO SEPARATE AT THE REQUIRED FORCE. | | | | | | |
| CORRECTIVE ACTION-VENDOR WILL USE MORE COMPATIBLE MATERIALS IN CONNECTOR MANUFACTURE. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 9A-20-009 MANDREL | FAR 27-43010-503 | 590725 | ETR | YES NO | GO/C NO 093402 |
| FAILURE MODE-SHORT (ELECT)-DURING PRESSURIZATION OF THE SET, A SHORT CIRCUIT WAS FOUND IN THE MUELONS DIELECTRIC COATING OF THE LOX MANOMETER. | | | | | | |
| CORRECTIVE ACTION-GO/C TOOK CORRECTIVE ACTION RELATIVE TO CONTAMINATION AND DESIGNED A CONTROLLED MANUFACTURING ARE A IN WHICH THE PROPELLANT UTILIZATION MATCHED SETS WILL BE PRODUCED. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A2M-27-272/FC-400-06-22 HARNESS | COMPOSITE-FACTORY 220 590710 | 220 590710 | YES NO | GO/C NO | 094662 |
| FAILURE MODE-ELECTRICAL OPEN. OPEN CIRCUIT (PIN B OF P601 ON HARNESS FOR V1 YAW). ALSO OPEN CIRCUIT (PIN D OF P203 ON HARNESS FOR PROGRAMMER. INTEGRATOR, SERVO AMPLIFIER). V1 YAW SHOWED NO MOVEMENT DURING TEST. | | | | | | |
| SYSTEM EFFECT-OPERATION DOES NOT START. HARNESS HAD OPEN SIGNAL LEADS. | | | | | | |
| VEHICLE EFFECT-COMPOSITE DELAYED. POST COMPOSITE RETEST VERIFIED PROPER OPERATION. | | | | | | |
| CORRECTIVE ACTION-REPAIRED PLUGS OF BOTH HARNESSES AND RETESTED. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 86-14-010 ELECTRICAL CONNECTOR | FAR CA3108E-14F-78 | 90 590711 | BYCAMORE | YES NO | GO/C NO 093979 |
| FAILURE MODE-ELECTRICAL OPEN CIRCUIT WAS FOUND IN THE SUBSTAINER YAW FEEDBACK CIRCUIT AT THE CONNECTOR. | | | | | | |
| CORRECTIVE ACTION-A NEW CONNECTOR POTTING PROCEDURE WAS CREATED. | | | | | | |

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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO | |
|---|---|--------------------------------|---------------------|------------------|------------|-------------------------------|---------|
| ELECTRICAL-A/B POWER DISTRIBUTION | B8-14-019 ELECTRICAL PLUG | FAR PT08E-8-38/101 | 9U 390820 | SYCAMORE | YES | BENDIX | 895876 |
| FAILURE MODE-ELECTRICAL OPEN CIRCUIT OF PIN (B) CAUSED LOSS OF BOOSTER ENGINE FEEDBACK TRANSDUCER EXCITATION AND OUTPUT INFORMATION. | | | | | | | |
| CORRECTIVE ACTION-IMMEDIATE MODIFICATION OF ALL (D) SERIES MISSILE ITEM PLUS LEADS WITH A MORE FLEXIBLE LEAD AND MORE POSITIVE LEAD WIRE RESTRAINT. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | B8-14-013 ELECTRICAL CONNECTOR | FAR 6P3108E-108L-38 | 2D 390613 | FACTORY | YES | 60/C NO | 895880 |
| FAILURE MODE-STRUCTURAL. WIRE POTTING FAILURE TO ADHERE TO PLUG SHELL WHICH PERMITTED 90 DEGREE WIRE CABLING ROTATION AND UNIQUE STRAIN. | | | | | | | |
| CORRECTIVE ACTION-NEW CONNECTOR POTTING PROCEDURE WAS CREATED. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | D437/A1-40E-00-04 INVERTER | FAR | 4D 390329 | A-1 | NO | NO | 895876 |
| FAILURE MODE-FAIL DRIPT. FREQUENCY SENSOR HAD DRIFTED OUT OF SPECIFICATION AND PREVENTED MISSILE FROM BEING TRANSPORTED TO INTERNAL POWER. | | | | | | | |
| SYSTEM EFFECT-OPERATION DOES NOT START. MISSILE REMAINED ON GROUND POWER. | | | | | | | |
| VEHICLE EFFECT-COMMIT SEQUENCE AND TEST WERE ABORTED. | | | | | | | |
| CORRECTIVE ACTION-THE SENSOR CHASSIS WERE REMOVED AND REPLACED. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | B8-06-025 HARNES | FAR 6P3108E-28-135 | 2D 390350 | SYCAMORE | YES | CONVAIR NO | 8958104 |
| FAILURE MODE-OPEN (ELECT.). THREE OPEN CIRCUITS INDICATED DURING TESTS. CAUSE OF FAILURE WAS INSUFFICIENT POTTING, TWISTED CABLE, NO INSULATION SLEEVES OVER SOLDERED CONNECTIONS, THREE BROKEN WIRES, AND CORROSION. | | | | | | | |
| CORRECTIVE ACTION-NEW POTTING PROCEDURE INITIATED APPROXIMATELY 8-18-68. | | | | | | | |

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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIF | PR1 OTH | PR1 OTH | VENDOR NAME VENDOR PART NO |
|---|---|--------------------------------|---------------------|--------------|--------------------|-------------------------------|
| ELECTRICAL-A/B POWER DISTRIBUTION | B8-14-011 CHANGEOVER SWITCH | PAR 7-08108-801 | 390423 | FACTORY | YES KINETICS NO | 894809 |
| FAILURE MODE-FAIL TO OPERATE AT PRESCRIBED TIME. SWITCH FAILED TO TRANSFER FROM INTERNAL TO EXTERNAL. | | | | | | |
| CORRECTIVE ACTION-NONE. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-04-010 HARNES3 | PAR 7-07741-803 | 118 390416 | ETR 7-110 | YES 60/C NO | 898336 |
| FAILURE MODE-FAIL DURING OPERATION THE B2 ENGINE FAILED TO MALL AT 7-110 SECONDS DURING THE COUNTDOWN. A WIRE IN A HARNES3 BROKE WHERE IT IS ROUTED ACROSS A HORIZONTAL STRUT IN THE MISSILE THRUST SECTION. | | | | | | |
| CORRECTIVE ACTION-ALL MISSILE ELECTRICAL HARNESSES IN THE FACTORY AND AT ETR WERE SURVEYED TO DETERMINE DAMAGE. NONE WERE. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | AZL-27-050/P3-402-00-03 HARNES3 | FLIGHT | 3D 390414 | 13 -210 | YES YES | 898413 |
| FAILURE MODE-FAIL TO OPERATE AT PRESCRIBED TIME. OPEN CONDITION OF LIQUID OXYGEN FILL AND DRAIN VALVE POSSIBLY CAUSED BY FAULTY ELECTRICAL CIRCUIT. | | | | | | |
| SYSTEM EFFECT-DEPLETION OF LIQUID SUPPLY. LEAKAGE THROUGH THIS VALVE STARTING AT THE TIME OF DISCONNECT CAUSED A 1 MEDIANTE 36 PERCENT REDUCTION IN B2 ENGINE PERFORMANCE. | | | | | | |
| VEHICLE EFFECT-PREATURE BOOSTER ENGINE SHUTDOWN. ENGINE COMPARTMENT EXPLOSION AND BOOSTER SHUTDOWN AT 28 SECONDS A NO VEHICLE DESTRUCT IN RESPONSE TO RANGE SAFETY COMMAND AT 36 SECONDS. | | | | | | |
| CORRECTIVE ACTION-PROCEDURAL CHANGES AND INSTRUMENTATION ADDITIONS WERE IMPLEMENTED TO BETTER DETERMINE LEAKAGE PAS T THE AIRBORNE VALVE. OPEN AND CLOSED POSITION OF VALVE ALSO TO BE RECORDED ON EA RECORDER. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-20-008 MANOREL | PAR 7-43016-87 | 7C 390321 | ETR 7-110 | YES 60/C NO | 898384 |
| FAILURE MODE-SHORT(ELECT)-LOX MANOMETER HAD AN ELECTRICAL SHORT. AT 35 PSI INPUT, DURING A SHORT CIRCUIT TEST ON MI 88:LE 7C. | | | | | | |
| CORRECTIVE ACTION-A NEW MANOREL DIELECTRIC COATING HAS BEEN DEVELOPED AND IS NOW BEING USED AS THE COATING MATERIAL | | | | | | |

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GENERAL DYNAMICS
CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DI' DATA SOURCE PART NUMBER | VEHICLE DATE DIP | SITE TIME DIP | PRI O'4 | VENDOR NAME VENDOR PART NO | |
|---|---|--------------------------------|---------------------|------------------|----------------|-------------------------------|--------|
| ELECTRICAL-A/B POWER DISTRIBUTION | 14-404-B1-90 PROPELLANT UTILIZATION CANNISTER C CONDENSER | CAPTIVE | 590304 | WTR | YES NO | | 097928 |
| FAILURE MODE-OPEN (ELECTRICAL). THE ERROR DEMOD SIGNAL (U081V) WAS INTERMITTANT FROM TEST START AND WAS LOST COMPLETELY AT 98.5 SECONDS. INSPECTION OF THE PU COMPUTER COMPARTOR PACKAGE REVEALED A BROKEN CONDENSER TERMINAL (CE07 O P SCHEMATIC NO. 74311). | | | | | | | |
| SYSTEM EFFECT-IMPROPER ANALOG SIGNAL-THE ERROR DEMOD OUTPUT SIGNAL WAS INTERMITTENT UNTIL 98.5 SECONDS WHEN IT FAILED COMPLETELY. | | | | | | | |
| VEHICLE EFFECT-NONE. THE CONVAIR PU SYSTEM WAS OPERATING OPEN LOOP. | | | | | | | |
| CORRECTIVE ACTION-THE CAPACITOR WAS REPLACED. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 88-14-021 ELECTRICAL CONNECTOR | FAR CA108E-10SL-38 | 90 590211 | FACTORY | YES 60/C NO | | 093576 |
| FAILURE MODE-ERRATIC OPERATION FROM INTERMITTENT CONDITION IN THE (B2) PITCH SERVO VALVE CIRCUIT. | | | | | | | |
| CORRECTIVE ACTION-IMPROVED AREA QUALITY CONTROL AND MANUFACTURING PROCEDURES. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | PTA4579/P1-202-00-11 HARNES | COUNTDOWN | 11B 590204 | 11 -5400 | YES NO | | 093011 |
| FAILURE MODE-OPEN ELECTRICAL. A WIRE LEADING TO THE B2 YAW SERVO CONTROL VALVE WAS BROKEN. | | | | | | | |
| SYSTEM EFFECT-IMPROPER DISCRETE SIGNALS. THE B2 ENGINE COULD NOT BE ZEROED AND NO YAW SIGNALS WERE RECEIVED AT THE MISSILE. | | | | | | | |
| VEHICLE EFFECT-COUNTDOWN DELAYED. 15 MINUTES HOLD TIME. | | | | | | | |
| CORRECTIVE ACTION-SPICE THE WIRE. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-20-004 MANOREL-LOX MANOMETER ASSY | FAR 7-43009-11 | 11B 590130 | ETR | YES 60/C NO | | 093569 |
| FAILURE MODE-SHORT (ELECT.)-DURING A SYSTEM CHECK- OUT ON MISSILE 11B AN ELECTRICAL SHORT APPEARED AT 90 PSI MANOMETER PRESSURE AND DISAPPEARED WHEN THE PRESSURE FELL BELOW 25 PSI ON LOX MANOMETER. | | | | | | | |
| CORRECTIVE ACTION-EMPHASIS WILL BE INCREASED ON CAREFUL COATING OF MANOREL WITH SILICONE UNTIL A NEW DIELECTRIC BECOMES EFFECTIVE. | | | | | | | |

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GENERAL MAPICS
CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | SITE TIME DIP | PRI OTH | VENDOR NAME VENDOR PART NO | |
|--|---|--------------------------------|---------------------|------------------|------------|-------------------------------|--------|
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-20-003 HARNES-PROPELLANT UTILIZATION | FAR 7-42016 | 4C 590123 | ETR | YES NO | 50/C | 993323 |
| FAILURE MODE-SHORT(ELECT)-PLUG FAILED DUE TO WATER GROUNDING THE UNPOTTED CONNECTORS INTERNALLY ON HARNES. THE MEA SUREMENT IS BETWEEN THE P/U VALVE AND THE COMPUTER COMPARTMENT. GROUND WAS CAUSED BY WATER DRIPPING ON THE PLUG FOLLO WING THE LOX DETANKING OPERATION. | | | | | | | |
| CORRECTIVE ACTION-50/C REVIEWED ELECTRICAL HARNES DRAWING TO ASSURE THAT PROPER POTTING IS CALLED OUT ON DRAWING. ALL C SERIES MISSILE WILL BE POTTED. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-20-002 MANOREL | FAR 7-43011-3 | 13B 590110 | ETR | YES NO | 50/C | 993371 |
| FAILURE MODE-SHORT (ELECT)-FAILED DURING FTP H-004. MANOMETER SHORTED OUT AT 2.5 PSI. | | | | | | | |
| CORRECTIVE ACTION-THE MANOREL DIELECTRIC COATING WAS REPLACED WITH A NEW TYPE OF COATING. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | FTA4566/P1-22M-01-11 SWITCH-POWER CHANGEOVER | COMPOSITE-B FACT | 11B 590109 | 11 | YES NO | | 994877 |
| FAILURE MODE-FAIL DURING OPERATION. COMPONENTS FAILED IN THE MISSILE POWER CHANGEOVER CANISTER. SYSTEM EFFECT-OPERATION DOES NOT START. PHASE A VOLTAGE WAS NOT SUPPLIED TO THE TELEMETRY AND DOVAP SYSTEMS. VEHICLE EFFECT-NONE. | | | | | | | |
| CORRECTIVE ACTION-REPLACE POWER CHANGEOVER CANISTER. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 51-307-85-02 MANOMETER | CAPTIVE | EC 590108 | 5VC 215 | YES NO | | 992693 |
| FAILURE MODE-SHORT. LOX MANOMETER HAD INTERMITTENT SHORT THAT WAS EXCITED BY MISSILE VIBRATION. SYSTEM EFFECT-ERRATIC OPERATION. VEHICLE EFFECT-NONE. | | | | | | | |
| CORRECTIVE ACTION-REPLACE MANOMETER. | | | | | | | |

GENERAL DYNAMICS
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DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SIB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO |
|---|--|--------------------------------|---------------------|------------------|------------|-------------------------------|
| ELECTRICAL-A/B POWER DISTRIBUTION | PTA4517/P4-202-00-13 MANOMETER | COUNTDOWN | 138 501230 | -760 | YES NO | 000094 |
| FAILURE MODE-ELECTRICAL SHORT. COULD NOT OBTAIN A PU WALL INDICATION DURING LOK TOPPING. WENT TO STAGE 3 PRESSURIZATION TO DETERMINE EFFECT. GOT FUEL RICH INDICATION. FUEL MANOMETER WAS LATER FOUND TO HAVE BEEN SHORTED UNDER PRESSURE. | | | | | | |
| SYSTEM EFFECT-IMPROPER ANALOG SIGNALS. COULD NOT OBTAIN A PU WALL INDICATION DURING LOK TOPPING. | | | | | | |
| VEHICLE EFFECT-COUNTDOWN ABORTED. 11 MINUTES HOLD. | | | | | | |
| CORRECTIVE ACTION-REPLACED PU SYSTEM. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-04-008 FEEDBACK TRANSDUCER ACTUATOR | FAR | 138 501212 | ETR | NO YES | 000224 |
| FAILURE MODE-ELECTRICAL SHORT. DURING SYSTEM TESTING, OPERATION STOPPED. UNIT REPLACED. NEW UNIT FAILED SIMILARLY. FEEDBACK TRANSDUCER TRANSFORMER OPEN CIRCUITED (BOTH UNITS). CAUSE OF FAILURE TRACED TO HARNESS SHORT IN LEAD TO V 2 PITCH FEEDBACK TRANSDUCER. SHORTED TO MISSILE THROUGH TAPE. | | | | | | |
| CORRECTIVE ACTION-SPLICES ELIMINATED. PLUGS AND CONNECTORS ADDED TO FEEDBACK TRANSDUCER. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | 98-04-008 HARNESS | FAR | 138 501212 | ETR | YES NO | 000225 |
| FAILURE MODE-ELECTRICAL SHORT. WIRES TO V2 PITCH FEEDBACK TRANSDUCER IN THE ACTUATOR HARNESS WERE SHORTED CAUSING A TRANSFORMER IN A/P SYSTEM TO OPEN. SHORT WAS THROUGH HEAT RESISTANT TAPE. | | | | | | |
| CORRECTIVE ACTION-SPLICES ELIMINATED. PLUGS AND CONNECTORS ADDED TO FEEDBACK TRANSDUCER. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | PTA4413/P1-202-00-10 CONNECTOR-RETRO ROCKET NO. 1 | FRP | 108 501210 | 11/ETR -10800 | YES NO | |
| FAILURE MODE-SHORT (ELECT). A SHORT IN THE PLUG AT RETRO-ROCKET NO. 1 CAUSED FAILURE OF RELAY K3 AND CONSEQUENT ARCING TO GROUND WHEN POWER WAS APPLIED. K3 WAS EXTERNAL TO THE RSC CANISTER BUT PROVIDED FOR RETRO-ROCKET FIRING FROM THE AFCS SIGNAL. | | | | | | |
| SYSTEM EFFECT-OPERATION DOES NOT START. AFCS SIGNAL, SHOCK WAS OBSERVED AT POD 1. SHOCK DISAPPEARED WHEN MISSILE POD WAS TURNED OFF. INVESTIGATION SHOWED WIRING BURNED OFF FROM LEAD IN TO K3 RELAY WHICH SUPPLIES 28 V TO THE RETRO ROCKETS. NO VOLTAGE WAS AVAILABLE TO FIRE RETRO ROCKETS. | | | | | | |
| VEHICLE EFFECT-COUNTDOWN DELAYED. 22 MIN. HOLD. | | | | | | |

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CONVAIR DIVISION

DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF TIME | SITE DIF TIME | PRI DIF OTH | VENDOR NAME VENDOR PART NO | |
|--|--|--------------------------------|--------------------------|------------------|----------------|-------------------------------|--------|
| CORRECTIVE ACTION-TEST PERFORMED WITHOUT RANGE SAFETY COMMAND SYSTEM. HARNESS WIRES PIGTAILED BACK. | | | | | | | 893612 |
| ELECTRICAL-A/B POWER DISTRIBUTION | 2C-7-210/P4-2BN-02-12 FUEL MANOMETER | COMPOSITE-B FACT | 125 38117 | ETR | YES NO | | 893636 |
| FAILURE MODE-SHORT (ELECTRICAL). THE FUEL MANOMETER WAS FOUND TO BE SHORTED. SYSTEM EFFECT-IMPROPER ANALOG SIGNALS. THE SHORTED MANOMETER RESULTED IN ERRONEOUS READINGS FROM THE PU SYSTEM DURING FUEL TANKING. VEHICLE EFFECT-NONE. THE FLIGHT ACCEPTANCE TEST (TEST NO. P4-2BN-03-12) WAS SUCCESSFULLY REUN ON 18 NOVEMBER 1958. | | | | | | | |
| CORRECTIVE ACTION-THE PU SYSTEM MATCHED SET (NO. 13) WAS REPLACED WITH MATCHED SET NO. 14. | | | | | | | 893130 |
| ELECTRICAL-A/B POWER DISTRIBUTION | ZB-7-079/11-203-B2-07 ELECTRICAL STAGING DISCONNECT PIN | CAPTIVE | 78 580810 | EDWARDS D | YES NO | | |
| FAILURE MODE-ERRATIC OPERATION. INTERMITTENT CONTACT WAS MADE ACROSS PINS OF PROPULSION ELECTRICAL STAGING DISCONNECT. SYSTEM EFFECT-IMPROPER DISCRETE SIGNALS. VEHICLE EFFECT-PREATURE PROPULSION CUTOFF. OBSERVER CUTOFF. CORRECTIVE ACTION-REPAIR PLUG. | | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | FTA2342/P4-101-00-13 CONNECTOR-ELECTRICAL | FRF | 13A 580131 | 14/ETR D | YES NO | | 893330 |
| FAILURE MODE-ELECTRICAL OPEN. INTERMITTENT LOSS OF NEGATIVE EXCITATION VOLTAGE TO THE B2 YAW FEEDBACK TRANSDUCER WAS BEING CAUSED BY A POORLY MATED SKIRT DISCONNECT PLUG (P1010). SYSTEM EFFECT-ERRATIC OPERATION. THE BOOSTER NO. 2 ENGINE WAS INTERMITTENTLY DRIVEN HARD OVER IN A POSITIVE YAW DIRECTION TO THE MECHANICAL STOP. BECAUSE OF THIS, TEST DURATION WAS ONLY 28 SECONDS INSTEAD OF THE PLANNED 36 SECONDS. VEHICLE EFFECT-NONE. CORRECTIVE ACTION-PLUG WAS PROPERLY MATED AFTER THE TEST AND AN AUTOPILOT SYSTEM TEST SATISFACTORILY PERFORMED. | | | | | | | |

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DIFFICULTIES REVIEW-ELECTRICAL SYSTEM-AIRBORNE

| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIF DATA SOURCE PART NUMBER | VEHICLE DATE DIF | SITE TIME DIF | PRI OTH | VENDOR NAME VENDOR PART NO |
|---|---|--------------------------------|---------------------|------------------|----------------|-------------------------------|
| ELECTRICAL-A/B POWER DISTRIBUTION | PTA2889/P2-1MM-01-10 WIRING | COMPOSITE-FRD/DPL | 10A 971119 | 12/ETR | NO NO | 092901 |
| FAILURE MODE-FAIL TO OPERATE AT PRESCRIBED TIME. IMPROPER BATTERY HOOKUP FOR RBC SET NO 1. RESULTED IN NO OPERATION ON INTERNAL POWER. | | | | | | |
| SYSTEM EFFECT-OPERATION DOES NOT START. SYSTEM FAILED TO OPERATE ON INTERNAL POWER. | | | | | | |
| VEHICLE EFFECT-NONE. | | | | | | |
| CORRECTIVE ACTION-CORRECTED BATTERY HOOKUP AFTER THE TEST AND SATISFACTORILY CHECKED SYSTEM ON INTERNAL AND EXTERNAL POWER. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | ATP1-1, A3 PLUG P1021 | CAPTIVE | 9A 970810 | | YES NO | 094932 |
| FAILURE MODE-CONTAMINATION-THE GENERAL ELECTRIC GUIDANCE SYSTEM WAS NOT RECEIVING POWER DUE TO A CORRODED ELECTRICAL PLUG. | | | | | | |
| SYSTEM EFFECT-NONE-SYSTEM WAS NOT IN OPERATION. | | | | | | |
| VEHICLE EFFECT-COUNTDOWN DELAYED-COUNTDOWN WAS DELAYED TO INVESTIGATE SOURCE OF PROBLEM. | | | | | | |
| CORRECTIVE ACTION-PLUG WAS CLEANED AND REINSTALLED. | | | | | | |
| ELECTRICAL-A/B POWER DISTRIBUTION | A-99-14-232-F HARNES | FAR 27-25139-1 | | FACTORY | YES 60/C NO | 094286 |
| FAILURE MODE-FAILED OPEN DUE TO IMPROPER INSERTION OF CONNECTOR PINS DURING ASSEMBLY. | | | | | | |
| CORRECTIVE ACTION-VENDOR OF CONNECTOR WAS ALERTED. AN ADDED CHECK BEFORE THE HOUSING IS TORQUED WAS INCLUDED IN THE INSPECTION CYCLE. | | | | | | |
| ELECTRICAL-A/B COMPUTER | A-97-20-103F DEMULATOR-COMPUTER-P/U SYSTEM | FAR 27-43009-907 | 92E 810825 | WAPREN | YES 60/C NO | 096106 |
| FAILURE MODE-OPEN ELECTRICAL SET REPORTEDLY FAILED WHEN A NO-60 WAS RECEIVED FOR CARD 20 OF MARCHE. EDO VOLTAGE OUTPUT WAS IN ERROR. A BROKE WIPER IN AN ERROR BRIDGE-ADJUSTMENT POTENTIOMETER, R103, RESULTED IN AN ERRONEOUS BRIDGE RATIO SETTING. FRACTURE OCCURRED DURING FABRICATION OF THE WIPER LEAF OR DURING ASSEMBLY OF THE TRIMPOST. | | | | | | |
| CORRECTIVE ACTION-NO CORRECTIVE ACTION IS CONTEMPLATED BY VENDOR. | | | | | | |

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| SYSTEM SUB-SYSTEM | TEST/REPORT NUMBER FAILED COMPONENT NAME | DIP DATA SOURCE PART NUMBER | VEHICLE DATE DIP | SITE TIME DIP | PRI OTH | VENDOR NAME VENDOR PART NO |
|----------------------|---|--------------------------------|---------------------|------------------|------------|-------------------------------|
| | | | | | | |